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The Motion Picture CAMERA Magazine



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This scene from Universal Pictures' big new musical "TOP OF THE TOWN" shows why we say...

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RALPH MURPHY
Cameraman:
**JOE VALENTINE
A. S. C.**
Studio Chief Electrician:
FRANK GRAVES
Still by:
ED. ESTABROOK

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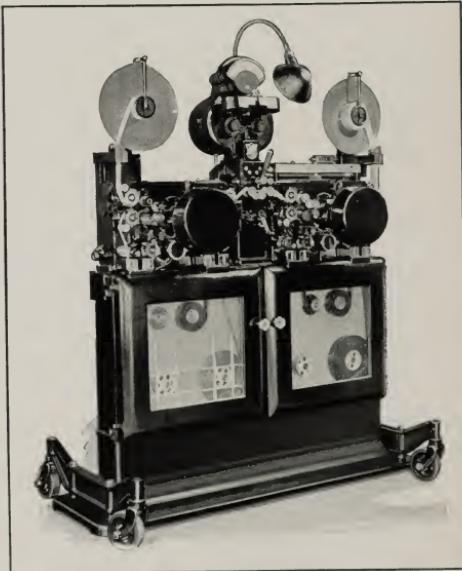


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JUST BREAKING IN

By GEORGE BLAISDELL

The Troupe Sends Greetings

A song we'll sing of this Hollywood bond,
Of the less and the great from ev'ry land . . .
The writers of words, the makers of songs,
The makers of joy, the righters of wrongs;
Actor, director and cameraman who
Give all of their best to entertain you . . .
True sometimes we hear this called Heartbreak Town—
Sometimes chill Fate really does get you down.

But 'tend to your knitting, hold high your chin,
Keep pounding and crashing and don't give in . . .
For Hollywood's walls are heavy and thick—
To climb them but few can master the trick.
A wot 'tis of wits, of brain and of brown,
But great is the prize if you last till dawn.
Like the soldiers in Bony's high rolling tides,
A Marshol's baton in each knapsack rides.

And here's to our friends the wide world around,
On land or on sea where Screen may be found,
Greetings we send from this Heartbreak Town's crew,
From each one of us to each one of you!

AGE CANNOT WITHER

A DECADE AGO a picture ran its course and was formally removed from the screen. There was but one physical reminder of a subject's entrance and departure, that practically all of its positive prints had ascended in smoke. The survival, of course, was the negative. That was written off the books as a rule and shoved into vaults, with perhaps a record somewhere indicating its whereabouts. There was possibly a chance in the hundred or it might be "revived."

Not so is the situation today. The life of those pictures which in their earlier runs were rated in the higher brackets of entertainment is extended away beyond the dead line of other days. The discovery by neighborhood exhibitors that a subject that was good although several years old was a better box office attraction than an up-to-date lemon was responsible for delaying the death of many films.

- For a few days in February one of the smaller Hollywood boulevard houses put on dually "Reunion in Vienna," first shown to the public in May, 1933, and "Tugboat Annie," released three months later. This reporter will admit he willingly picked the program against the others on the boulevard, feeling assured he would be better entertained than by taking a chance on the others.

Then again the hunter for entertainment wanted to see in fact as in fiction the shade of Marie Dressler of blessed memory. He never did have any sympathy

with the fears of the hysterically timid and overfearful producers and exhibitors who shied from a picture containing in the cast a person who no longer lived.

- Who is so bold as to assert that any such feeling will prevail in the years to come when a goodly percentage of well-to-do families will treasure films containing the faces and figures of loved ones long since lost? There hardly will be denial one of the greatest future sales arguments on behalf of the amateur motion picture equipment will be that in the years to come its product will be the family's greatest heirloom—provided of course ordinarily intelligent use is made of the camera and film.

As an illustration, in "Tugboat Annie" again we see pulsing with life the inwardly feminine though outwardly rugged but altogether lovable Marie Dressler. In her picture there was nothing to indicate she no longer was with us. Her portrayal now will have historical value, as will the other subjects in which she appeared—value because the player was as the legal men phrase it, "unique," and not to be replaced by others. May her memory never fade.

- In that same program was another characterization that a hundred years hence undoubtedly will possess lively interest for the students of drama—and that was the portrayal by John Barrymore of the "nut" prince of the house of Hapsburg. Have it your own way if you will when you say the chief performer was staging himself.

Seemingly the script writers felt that way about it, too, for they put it into their mouth words that seemed to be revealing Barrymorean as well as Hapsburgian history. But who cares? It was a corking performance. No other actor could have done it quite as he did.

- If on the producers' "don't book" in 1933 there were any rule against drinking scenes similar to that adopted within a few weeks no attention was paid to it. The enforcement of such a ruling would have robbed this particular subject of much of its flavor, color—yes, and historical accuracy.

But retracing our steps a bit, the screen in its returning to the living and the still loving the form and almost physical presence of those who have passed on will continue to bestow a major blessing on mankind—and it will continue steadily to enhance the value in the studio and in the home of all the man-created devices that make possible the recording of these images on film.

JOE FISHER HEARD FROM

Speaking Photographically

A LONG TIME AGO—so long ago a recital of the quip now may be rated as news—Wu Ting-Fang, a famous Chinaman and at the moment diplomatic representative of his country in the United States, attended a reception in Washington.

His eyes rested upon a tall and angular woman, rarely lean as it were and exceedingly decollete. Wu's masculine companion turned his gaze in the same direction. The Chinaman leaned closer as he almost whispered:

"Speaking photographically, might it not be said the lady would seem to be overexposed and underdeveloped?"

- When Paul Perry was preparing for the trip to the Orient from which he has recently returned he was asked by this writer to look up Joe Fisher and to say "Hello."

There was a grim smile on the face of the returned traveler when he sighted the editor. "I saw your friend Joe Fisher," he said. "And when I said 'Hello' for you he just laughed. No, no, I'm sure he has not forgotten you. He seemed to remember you plenty well.

Continued on page 123



Members of the Franklin-Grandville Expeditions Ltd. in Calcutta with some of their sound equipment. The expedition was organized by Fred LeRoy Grandville, A.S.C. From left to right are Mr. Schulmeister, laboratory; Major W. J. Moylan, production manager; Mrs. Franklin, Captain Norman Franklin and Paul Perry, A.S.C.

They Make Pictures In India

by
Paul Perry, A.S.C.

INDIA'S MOTION PICTURE STUDIOS turn out more than 300 feature productions each year. These pictures are made by native Indian artists and technicians, about native subjects, for that vast majority of India's three hundred millions who prefer to be entertained by their own people, speaking their own languages. To me, however, the most remarkable thing about India's film growth is the fact that her film technicians are largely self-taught, and in spite of this handicap are producing highly creditable pictures.

In this development, India's eyes are turned largely toward Hollywood for information and inspiration. The American Cinematographer is by far the most respected and influential film publication received in India; its technical articles by members of the A.S.C. and their fellow-workers in research, recording and the like are as gospel pronouncements in the Indian studios.

Most strikingly is this borne out by the fact that several years ago, in an article in the Cinematographer, L. E. Clark argued that the men who record motion picture sound deserved a title more fitting than "sound man" or "recording engineer." The Cameraman, he pointed out, had advanced his craft to a point where the bare designation "cameraman" was woefully inadequate, and while

undoubtedly he was a photographic engineer, he also was uniquely an artist; and fittingly to designate this unique combination the word "cinematographer" had been coined and had come into use.

Birth of Vocabulary

The same development, Clark continued, had taken place in the work and status of the recording experts. Accordingly, these men deserved an equally fitting designation. Since "cinematographer" indicates one who "writes with motion," should not his fellow-artist be termed one who "writes with sound"? And Clark suggested the name "audiographer."

Today, if in any of India's many and widely-scattered studios, you inquire about the "sound man" or "recording engineer" you are greeted with a blank stare. From one end of India to the other the dictators of the decibels are known as "audiographers" and their work as "audiography."

In the matter of technical equipment the Indian film industry is to a considerable extent Americanized, with second honors going to Germany. Most of the raw film used is of either Eastman or Agfa manufacture, though both DuPont and the British Selo products are represented. Bell & Howell and Mitchell cameras compete strongly with the French-made DeBrie "Super-Parvo." The latter have a considerable advantage in price and, I think, in the commissions paid its agents. At any rate, more and more DeBries are coming into use.

Americans and British Lead Sound

Lighting equipment represents another contest between American and German products. Hollywood-made Mole-Richardson lamps are well known and extensively used, but German lamps, thanks in no small part to the aid of price and commissions, are also very widely used. Quite a few of the new M-R "Salarspots" are to be found in the better-equipped Indian studios. As yet no foreign manufacturer has anything that can compare with them. Now that a British Mole-Richardson plant has been started in London these lamps should have definite advantages in India, for the Government gives British-made products a marked preference in duties.

Sound equipment is largely American and British. RCA, Western Electric and British Acoustic are the leading sys-

tems, though many others, such as Fidelitytone, Tobis-Klangfilm, Balsley & Phillips, and the like, also are heard from. In my travels through India, I was repeatedly amazed at the strange places I encountered independent producers using Artreeves sound systems. I would land in a place where I was quite sure no one had any idea of film production—and find an Artreeves outfit working merrily. There are 43 of these in India.

As regards editing equipment, Moviolas, while there are a few in India, are practically unknown. Instead, they use the German "Union" Editing Tables. These are really interesting machines. They consist of a large metal table, with four horizontal stripping-flanges and separate picture and sound movements. The film travels on its edge. The picture-image is viewed through an aperture in the table about the size of the opal inspection-glasses we see in American cutting-room tables.

Majors and Independents, Too

The films may be run forward or backward, at any speed, or held still on a given frame, and there is the advantage of being able to run the sound and picture at different speeds, to restore synchronization, etc. If it is desired to check on lip-movements, pressing a lever projects the picture up to about 3 by 4 foot size on a wall screen.

Most of the larger studios have DeBrie automatic developing machines for both negative and positive, though some of the smaller independents still use rack-and-tank. While I was in Bombay, Imperial Pictures installed a complete Cinecolor laboratory, and is now producing features in color.

The industry in India is divided into major and independent producers, much as it is here in Hollywood. Among the majors may be mentioned Imperial, Bombay Talkies, which has one of the most modern studios in India, and virtually the only one in which the department heads are Europeans (Germans), and Wadia, all of which are in Bombay; Prabhat, in Poona; Saraswati Talkies, in Kolhapur, and the East India Film Company and New Theatres in Calcutta.

Over One Hundred Producers

This, of course, is only a partial listing, for India has six or eight major firms and a total of over a hundred producing companies, working in almost fifty studios scattered around the land. Bombay is by far the main production center, with Calcutta next, and Poona, Kolhapur, Madras and Lahore also active. As may be imagined, there are a number of service studios, the largest of which is Film City, in Bombay. This plant compares very favorably with Hollywood's smaller studios, and was built by the late A. Fazalbhoy of the Bombay Radio Company, the enterprising distributor for Bell & Howell, Mitchell and DeBrie cameras, Mole-Richardson lamps, British Acoustic and RCA sound, Moviolas, and a variety of other products.

The Indian technicians are almost without exception self-taught, and a very earnest, studious group of men. They have reached a stage in their collective evolution comparable to that which we in Hollywood had attained at the time when the American Society of Cinematographers was organized. Many of our old-timers can recall how in the early days there was very little intercourse between workers in the different studios; how ideas developed on one lot were jealously guarded lest some unmitigated scoundrel from another studio might appropriate them.

As everybody knows, since the A.S.C. brought the members of the cinematographic profession into close, open-minded contact, progress, individual and collective, has been amazingly rapid. India is at that same stage. Only within the last few years have there been organizations

to bring together the men from the different studios. These are the Motion Picture Society of India and the Film Technicians of India, organizations which are doing a great work for Indian pictures.

A Keen Audience

During my stay in India it was my privilege to be invited to address the former group, and to be made one of its honorary members. I am sure no speaker ever had a more interested audience than I did that night, nor one whose questioning so clearly showed how studiously his auditors follow their subjects. I was greatly relieved to find that although these men are making pictures in such native tongues as Hindi, Urdu, Tamil, Bengali and even Persian, most of them speak and understand English surprisingly well.

One unfortunate misunderstanding did occur, however. That was when I was asked about the relationship between Cinecolor, Multicolor, Magnacolor, Vericolor, and the other bipack color processes. My natural reply was they were all alike in the photographing, but differed in their printing technique. That was misinterpreted into the statement there was no difference at all between them.

India has some surprisingly fine cinematographic and audiographic artists. Unfortunately, when I left India, I planned to return immediately, rather than to swing around via Hollywood. Accordingly, I left without making proper notes of the names of these gentlemen and they are names not easily remembered by an Occidental, so I cannot credit them as I would like. For this I apologize.

India's prime technical weakness is in accessory equipment and in laboratory and cutting technique. There is much that is commonplace here in Hollywood which is unknown there, probably for the reason that they have had no opportunity to see the equipment itself in actual use, and naturally dislike to gamble where relatively large sums, high import duties, and 6,000 miles of distance are involved.

The laboratories in the major studios are excellently equipped and capably operated. They have a tremendous problem to contend with in the climate, however. American and European makers of developing machines have not fully taken this into consideration; for example, due to the high humidity, much additional dry-box space is necessary, and, due to the heat, drying should be by air-conditioning rather than mere heating.

Continued on page 102

Not Tennis Champion Fred but Paul Perry, A.S.C., disregarding good-natured jibes of tennis addicts but taking up game in self defense. Hindu bearer or servant at left.



RIVER ROLL ALONG

by
Fred ("Red") Felbinger

MR. DEVEREAUX checked the river gauge, and only after Mr. Devereaux, Cincinnati's official predictor, checked the river gauge did he dare predict an all-time flood stage of 75 feet for Cincinnati.

However, long before Mr. Devereaux predicted a 75-foot flood stage for Cincinnati, newsreel editors had moved a battalion of lens snipers into Cincinnati. You see, 75-foot flood stage would pass the all time record for Cincinnati, set in 1913 by the Ohio River.

Long before the gauge hit the 75 mark this flood was already news . . . National news! So the ace newsreelers, from New York and Chicago, had already had a flood story, built around Cincinnati, in the can.

This was a flood, a real flood, and when she hit the 75-foot mark she shot the works. She proved Mr. Devereaux, the official predictor for Cincinnati, an expert. She broke the '13 record and she proved that the New York newsreel editors could smell a real story miles away.

If you had your doubts about the New York newsreel editors, all you had to do was check the personnel they had stationed at Cincinnati when she blew. The newsreel cameramen covering Cincinnati were doing a conscientious job so far.

Here Was Big News

Then the gas tanks up Millcreek Valley let go, fire burst out, and for hours it seemed another catastrophe, like the 'Frisco disaster, or perhaps the great Chicago Fire, would scribble the name Cincinnati into the pages of history. The great Cincinnati fire of '37!

That's why the newsreel lensmen stood there in pouring rain, facing fire and flood waters, recording on film for an unseen audience and posterity the great Cincinnati catastrophe of '37. News was not any longer in the making. News was here and big in Cincinnati. The fire was covered and the flood was covered.

Then a mad scramble to ship the precious negative to New York. Trains were no longer running into Cincinnati. The railroads had called an embargo on all shipments and the airport was under water. The newsreelers had covered the Cincinnati flood and the great Millcreek Fire, but covering such an event was not sufficient.

What the hell good did it do a newsreeler to cover such a news story if you couldn't ship the stuff? So a feverish dash by boat and car for Columbus, the closest point to ship—and finally the editors received the stuff at New York, and an outside world had its first inkling of a great catastrophe.

Meanwhile, Mr. Devereaux had measured up to his reputation as a predictor. The river reached the 75-foot stage, an all time record for Cincinnati.

The waters lapped at the foundations of the water works plant! It went out!

The river lapped at the foundations of the electric plant. It went out!

And Cincinnati, a metropolis in the Middle West, was paralyzed and isolated.

Newsreelers had covered up to this point and had a great catastrophe in the can! . . . But the real story was still to come!

The river went over the 75-foot stage! It rose higher and higher! And then the Ohio River mastered its smallest and most picayune enemy . . . Man!

Cincinnati . . . Lawrenceville . . . Louisville . . . Evansville . . . Paducah . . . Cairo.

Ole' Man River . . . he just rolled on . . . sweeping off in his way . . . and the newsreelers were there . . . recording the greatest catastrophe story of all time!

Tight Spot for Six

At Cincinnati three newsreelers set out in a Coast Guard boat. The current was running fast . . . one newsreeler in his excitement to get a good skyline shot went overboard . . . his Akeley camera caught his foot . . . two other newsreelers bore down on the camera to hold him to the cutter.

If he went into the river he was doomed. His leg caught in a painful angle under the collapsed camera. The newsreeler screamed with pain: "My leg! my leg!" . . . a Coast Guarder yelled: "The hell with your leg . . . it's you we're trying to get back into the boat!"

And the cutter all the while was slipping toward a group of submerged buildings and certain capsizing of the cutter and drowning of its six occupants.

Then safely getting the newsreeler back into the boat and making the treacherous stream back to safety with the skipper yelling: "And the first one of you camera lugs that starts shootin' . . . why . . . I'll just mow you down with this spare ear I have here!"

Oh, for a Bath!

Then back to the hotel . . . No water for a bath . . . just a jug of well water for drinking purposes . . . and the typhoid shots in the arm . . . God! . . . how they sickened you . . . Your arm felt like someone hit you with a baseball bat . . . and two more shots to go . . . in the next two weeks . . . oh, to get out of Cincinnati, but that was impossible.

After all, the boss was depending on you coming through . . . no electric light . . . never knew the value of light and water before . . . oh, to be home and run the water faucet . . . clean hot water . . . for a bath . . . jeez! even to drink.

The river was still rising . . . would it never end? . . . the refugees, who had lost all. Their forlorn looks! Why, it even made a guy cry to hear their stories . . . and see their plight . . . and these hard-boiled cameramen.

This was the big flood of '37. Mr. Devereaux was right, but one didn't mention Mr. Devereaux any more. The river was up to 80 feet now, and still rising. Then the lull. She was now standing still. Houses were floating down the river, one after another . . . pictures . . . pictures wherever one aimed his camera . . . but for some reason you didn't thrill to covering it.

Here was a saga . . . the saga of the Ohio on a rampage . . . the ole river just rolled on and on, and with



it the heartaches of thousands . . . yeah! here were pictures, no matter which way you pointed your lens . . . but it kinder gripped at your heartstrings to be a witness to the havoc of Ole' Man River on a rampage.

Gagging Newsreelers

You no longer worried about no electric light . . . no bath . . . no drinking water . . . or the jumping poins in your arms from the typhoid shots. This was the big flood of '37.

Back at your hotel you figured how in hell you was going to get the new stuff into New York . . . for the deadline . . . but somehow you got through with it . . . and then you called your buddies at Louisville.

Louisville! Down in the Blue Grass country, where they run the Kentucky Derby! . . . Louisville! Now the big victim of the flood . . . the flood of '37! Louisville, which would replace Dayton in flood history, the Doyton of 1913.

Louisville, another metropolitan city, entirely submerged by flood waters! After much coercion and finnigling, you finally got your coll through to your buddy . . . another newsreeler covering Louisville . . . and you heard his pitiful tole . . . Mass burials! National Guardsmen pointing rifles at you for trying to cover and make shots of burying the dead! Why this gagging newsreelers? Nobody knew! But it was happening!

Some living conditions at Louisville if not worse than at Cincinnati. No drinking or bathing water, but a guy at least wanted to shave. This was accomplished by heating White Rock water in a 200 foot film can using three candles to heat the can.

Here is Fred ("Red") Felbinger, one of Paramount's newsreelers out of the Chicago office, standing at the edge of a receding stream which shortly before had submerged the Coco Cola sign across this Cincinnati street. No longer are the waters tumbling and filled with all the tragic and incongruous accompaniments that swirled south when the flood was at the peak. The cameraman has had a chance to get "cleaned up a bit," as he explained in a note. Also he was enjoying an opportunity to plant his tripod on the ground where for days his only platform had been a boat. The writer of this graphic story of hazard and personal discomfort has been doing this sort of thing for many years and looks upon it as all in a day's work. The still was photographed for the subject by an unidentified member of the Wide World staff. The newsreeler who was in such deadly peril when he went over the side of the Coast Guard boat was Emile Montemurro, staff cameraman for Fox-Movietone News, Chicago.

Newsreelers Fighting Odds

Hot water at any price! Then the cameraman's diet. A kerosene heater, in the hotel coffee shop, warmed the daily, frugal fare for the grinders; an eternal diet of just two choices on the menu, either scrombled eggs or beef stew, with a generous sprinkling of the kerosene fumes in all dishes served!

Then too, the perpetual danger of disease, from the contact with contaminated waters. This was Louisville, Blue Gross capital . . . home of the Kentucky Derby! Now merely one of the key points of the ravages of Ole' Mon River!

And further on down the river . . . Poducoh . . . Evansville . . . now completely submerged . . . and fellow newsreelers grinding away. Then Coiro . . . at the meeting

Continued on page 128



The Child and the Artist

LIGHTING SHIRLEY TEMPLE

by
Arthur Miller, A.S.C.

PHOTOGRAPHICALLY as well as personally, photographing Shirley Temple is one of the most interesting assignments of my experience. Perhaps I ought to say "four of the most interesting assignments," since the current production, "Wee Willie Winkie," is my fourth with Shirley.

In a career that goes back longer than I like to think I have photographed many children who were stars and near-stars. But I never knew anyone like Shirley Temple. It is almost unbelievable that any seven-year-old could be the focus of such universal acclaim as goes with the fact of being the world's No. 1 box-office personality and still remain unspoiled.

But Shirley does it. And this acclaim pursues her into the studio. I have seen distinguished visitors and hard-

bailed newspapermen, accustomed to meeting fame on even terms, gawk like yokels when Shirley was working.

I can't say I blame them, for Shirley is an unusual little trouper. Her ability for lines and business amazes each new director. Invariably she is letter-perfect in her lines. Often we will shoot three or four pages of dialog in a single scene—and even the most experienced actors might be excused for "blowing" some of Shirley's lines. But not Shirley! I have never known her to miss a line. If we could shoot only for her, we could wrap up every scene in one take.

Just for good measure, she is equally familiar with every other player's lines. Not only cues, if you please, but complete speeches. Often I've seen an experienced actor in a scene with Shirley blow up, perhaps in the middle of a long speech. Shirley will look at him, bursting to say "You should say this"—but she restrains herself, like the little lady she is.

On the last picture, "Stowaway," though, she said it. Robert Young has a fine sense of humor, and she knew she could kid him. He took it like a sport—and vowed to return the compliment at the first opportunity. But that opportunity never came!

In spite of this, Shirley will never let down a scene. The other players may blow and falter, but she is always ready to pick up the scene and carry it along.

I've noticed this in relation to lighting, too. Sometimes an unexpected change in action will make it necessary for Shirley to look toward an unusually strong light. Like any child, she doesn't like looking into high-powered lamps. But, unlike most children, she never shows it. She'll fulfill the requirements, take as brief as possible a glance toward the offending lamp, and then "cheat" a trifle one

Continued on page 100

PENETRATION

Cameramen on location in the desert near Yuma, Arizona, are working under difficulties in shooting this scene from the Technicolor production, "The Garden of Allah." Marlene

Dietrich and Charles Boyer co-star in this David O. Selznick production, under the direction of Richard Boleslawski. Howard Greene, Photographer; Hal Rosson, Photographic adviser; W. A. Oettel, Studio Chief Electrician.



Exceptional penetration and carrying power are required of a light source to pierce the obscuring clouds of a sand storm on the desert, but the carbon arc proved equal to the task.

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THE RECENT INTRODUCTION of a fundamentally new type of infra-red sensitive film, specifically devised for production use, has at a single stride advanced cinematography much closer to the long-sought goal of filming nearly all exterior night-effect scenes by daylight. The new film is a product of the Agfa-Ansco laboratories, and is the direct result of close cooperation between the film-making engineers and film-using Cinematographers.

It is not merely a modification of the firm's previous type of infra-red sensitized film, which is definitely a special purpose emulsion, but an entirely new type of film for the making of production night-effects. At a conservative estimate, from 50 per cent to 70 per cent of the night scenes now made at night, by artificial light, can now be made better and more efficiently by day with the new film.

Until quite recently, the making of daylight night-effects has been based on the use of extremely heavy filters which overcorrect the sky to night-time darkness, combined with definite underexposure to obscure the remainder of the scene. Even with the earlier infra-red sensitized emulsions, this general technique remained necessary, for while the sensitivity was extended into the infra-red region there nevertheless remained a considerable yellow-green sensitivity which necessitated the use of extremely heavy filters capable of completely absorbing these colors.

Agfa's previous infra-red film, introduced over a year ago, was probably the first commercially available cine film of this type with sufficient exposure speed in which this undesirable characteristic was eliminated. Accordingly, it permitted the use of far lighter filters, such as the Wratten 29-F. This emulsion, however, still retained a relatively high degree of contrast, and a sensitivity balance which made its use impractical for the more intimate scenes in which the flesh values of players was a most important consideration.

Full Exposure

The new emulsion is intended definitely for production use. The contrast characteristic has been reduced to a point comparable to that of normal super-panchromatic emulsion. The color-sensitivity has been adjusted to a point where convincing night-effects are possible without sacrifice of flesh-tone rendition in even the most intimate shots. There is no yellow-green sensitivity; the maximum correction is had with the Wratten 29-F filter. The overall speed of the film shows a marked increase; the shadow-speed of the new film, especially, is definitely higher than that of any previous film of its type.

In this connection, it should be understood that night-effect negatives made with this new film are fully exposed; the effect is the result of filtering and sensitivity rather



Production Night-Effects With Agfa's

by A. Farcot

than of underexposure. While it has generally been the case that filtered night-effects have had to be "printed for night"—usually at a printer light-setting definitely below normal—comparable effects photographed with the new film print normally, usually printing around light 15. They give convincing night-effects without loss of shadow-detail, and without exaggerated contrast.

The keeping qualities of the new film are understood to be excellent; the Agfa experts state that it will keep quite as long as normal superpan film, and without special handling.

Photographing night-effect scenes with this new film need not differ materially from the technique of making normal day-effects on conventional types of super-panchromatic. The Wratten 29-F filter has as yet been most generally used, and exposures have ranged from f:3.5 or less to f:2.3, according to light conditions. Any type of lighting may be employed. It has been found wise, however, to avoid a direct back-light, since atmospheric dispersion at this angle is generally so great as to whiten the sky beyond possibility of satisfactory correction. Outlining rim-lightings on people, produced by "booster" lights or reflectors, are very effective.

May Put Actors in Shade

In general, the most pleasing effects have been obtained with a cross-light, or with diffused front (or semi-front) lighting modeled in the usual manner with reflectors or "booster" lights. It is by no means necessary to play the people in direct sunlight; excellent results have been had with the players in the shade, with reflectors or artificial front-lighting as would be used in making a normal scene under such conditions.

Windows may be illuminated in the normal manner by artificial light. The flames of torches and flares pick up very effectively. At present experiments with chemically-treated flares are being conducted as the reflected light from more strongly red-orange flames should also affect this film, and would naturally simplify the problems of simulating the illumination cast by such torches.

Due to the fact that the night effect is produced by overall correction and not alone by overcorrecting the sky and underexposing elsewhere it is possible to achieve convincing night-effects with this film even in scenes where the sky does not figure.

No change in make-up is necessary other than the

Figure 1. Photographed on the new Agfa infra-red film by Victor Milner, A.S.C., and Dewey Wrigley, A.S.C. Three-inch lens at f:3.5 with Wratten 29-F filter; 2:30 P.M.; sun scrimmed on character, and M.P.A. light diffusion disc used. Photo courtesy Paramount Productions.

Fundamentally New Type of Infra-Red Film

Edouart, A.S.C.

substitution of the lip make-up closely comparable to that used for the old "blue transparency" process. To the eye and to conventional emulsions this lip rouge is virtually identical with the normal type; but where the new film lightens the conventional lip make-up it does not change the rendition of the other type, which while visually reddish has yet enough blue in its composition to be complementarily affected by the filtering used with the new film.

Convincing Effects

Tests made on this new film by various outstanding Paramount Cinematographers definitely indicate that it permits in many instances much more convincing night effects than either filming at night under artificial light, or by the previous methods of making filtered night-effects by day.

Tests made with it by Victor Milner, A.S.C., in preparation for his present production, for instance, have indicated its superiority to either previous method in scenes in which any considerable area is included. Hitherto, regardless of the method used, there was generally an increase in contrast, and little detail could be preserved except in the immediate foreground and in highlights.

In closer shots often all that would be visible would be the actors' faces and shadowy figures moving against a black background. Using the new film, the scene appears much more nearly as it would normally appear on a moonlit night, with a natural amount of detail visible in the shadows, and a considerably broader scale of gradation.

Prominent distant objects, such as mountains, etc., remain evident in the background of longshots and close angles alike, quite as they would naturally. "Practical" street lamps, torches, flares and the like give very natural effects, though it may be mentioned other tests indicate some experimentation is necessary before automobile headlights will photograph wholly naturally.

May Get New Dusk Range

With only a reasonable amount of care in using reflectors or "booster" lights their beams can be made to appear less obvious than is often the case in normal day scenes. Night scenes in which the sky does not figure are very convincing, especially when highlighted by artificial light from within house windows, doors, etc., or with a little highlighting on walls from "boosters."

Leo Tover, A.S.C., made some interesting tests of the

Figure 2. No loss of flesh values in this night-effect made on the new infra-red film by Victor Milner, A.S.C., and Dewey Wrigley, A.S.C. Photographed at 2:50 P.M. with a three-inch lens at f:2.7, Wratten 29-F filter, M.P.A. light diffusion disc; sun on actor scrimmed. Photo courtesy, Paramount Productions.

film in snowy mountain country, preparatory to using it on "I Met Him in Paris." Here, working with a subject and light conditions of extreme contrasts, the broader gradational scale of the new emulsion proved its value. From some of these tests, it would seem probable that a new range of twilight, dusk and even day effects may be obtainable with the new film and lighter filters. Parallel scenes, made in the conventional way with super-panchromatic film and a 72 filter, for night effect, appeared decidedly less convincing than those made on the new film with the Wratten "F."

Henry Sharp, A.S.C., was probably the first Cinematographer to use the film on actual production. Completing an exterior sequence of "Murder Goes to College" in the afternoon, with two night scenes to be made on the same set, he was able to film these shots at once, with the new film, rather than having to return at night.

Paramount Pioneering Film

And so in line with such a definite advance in night-effect photography, Ray Wilkinson, head of Paramount's camera department, became immediately active in the evolution and proving of the new film, taking advantage not only of its photographic superiority but also of the astonishing economic opportunities which can in all probability save the industry enormous sums.

"In one coming picture," he points out, "there are some tremendous night sequences, which we plan to film in two days using the new infra-red film. Otherwise, working by night, we could hardly expect to complete these scenes in less than three or four nights, at far greater expense—to say nothing of lessened personal and collective efficiency, which is always a factor in night work."

"The saving to any average production in transportation, electricity, equipment, labor and time—not to mention the inevitable unforeseen delays—should be as important a factor as the more convincing quality on the screen."

No All-Embracing Panacea

It should not be assumed that this new film is an all-embracing panacea for all types of night-effects. Definitely it is not. Some scenes will for some time to come be better filmed by conventional means. The use of the new film also calls for more careful coordination with the photographic staff, especially in the cases of the director and art director.

Such night scenes should naturally be scheduled for hours of favorable light-conditions. Costuming, set-painting, and the like, should take the film into especial consideration. For example:

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A.S.C. MEMBERS

ON PARADE

● **James Van Trees, A.S.C.**, was one member of a quartet of cinematographers on Universal's "Stones Cry Out" who attracted attention on the lot for his success in whipping the flu jinx that attacked the camera staff on the subject Harold Young aimed to finish in the course of time if the list of available photographers held out.

Gilbert Warrenton, A.S.C., opened the ball with a great start, but Ole Man Flu got him down after a struggle. Then entered J. V. T. with an abundance of pep leavened with a full measure of sympathy for those who were unable successfully to combat the flu specter. But O. M. F. even then had his number.

Richard Fryer, A.S.C., was the recipient of an emergency call to take charge of the photography on "Stones Cry Out," a title the sinister applicability of which seemed more and more negatively to appeal to those who were trying to work on it. Then **Ben Reynolds, A.S.C.**, got the hurry-up call, and none too enthusiastically responded as his immediate predecessor also took to his bed.

But **Van** having almost started the picture had an unbending ambition to finish it. When the fourth man on the list was found to be packing a temperature a retracing of those who had retired more or less indifferently revealed the second victim was ready to go again. And so he did. And "Stones Cry Out" slid silently into the old can to the intense relief of the U's camera department.

● **Henry Sharp, A.S.C.**, for the past month has been receiving congratulations on his marriage January 30 to Jean A. Thayer. The American Cinematographer for the intervening weeks has been impatiently awaiting the opportunity officially to add its good wishes to those of Henry's host of friends, wishes for a maximum of good health and of the blessings that go with life in harness, material and domestic.

● **Rudolph Mate, A.S.C.**, has gone to Big Pines on vacation. With him went his skis, the inactivity of which, if the truth be told, really was responsible for the trip. Singular indeed is it how a faithful follower of a craft the members of which aim at all times to keep their feet on the ground suddenly should be seized with an unquenchable urge to see how far he may lift his feet off the ground without resultant damage to the aforesaid earth or to his own anatomy.

● **Charles G. Clarke, A.S.C.**, is the latest of the cinematographers to step from the camera to the directing post. He has been assigned to direct the making of M.G.M.'s "Pigskin Packers," which will bring to the screen a shawing of the famous professional football team from Green Bay, Wis.

● **John W. Boyle, A.S.C.**, writes from Marseilles, France, he is on his way to Cairo. The Cairo you may be thinking about is not the one he is talking about. The message mentions a word or so about weather, something better than he recently has been experiencing seeming to be his urgent desire. So he was on his way to Egypt and not to Illinois. He announced his address as Mena House, Giza Pyramids, Cairo, Egypt.

● **John L. Herrmann, A.S.C.**, sends word from Miami—which is in Florida, that state where the cold is not, according to some—denying he had anything to do with the big floods around the Ohio and the Mississippi. Without even a remote tinge of noticeable regret at missing a part in the recording of that catastrophe, he explains his seeming indifference by intimating his cup on floods was filled to the brim last year in Johnstown, Pittsburgh and Wheeling. John at the time of writing was awaiting the coming of the big league ball players, the training of which he will cover. He wants to be remembered to all the bunch.

● **Hal Mohr, A.S.C.**, twenty-three years ago as an exceedingly young man was cinematographer on "Money." The leading character actor of the production, which was made in Fairfax, Cal., was Jerry Ash. Hal now has finished directing "When Love Is Young," Universal's comedy of romance. Jerry Ash also was around about the picture, too, only it was **Jerry Ash, A.S.C.** You get one guess as to just what his duties were.

● **Hal Rassan, A.S.C.**, has been assigned by Metro and now is shooting "They Gave Him a Gun." W. S. Van Dyke is directing.

● **Gregg Taland, A.S.C.**, has entered into a five-year agreement with Samuel Goldwyn under which he will direct as well as photograph pictures. The cinematographer already has a record of thirteen years in the camera department of the Goldwyn company, which is something of a record of itself.

● **Clyde De Vinna, A.S.C.**, has been assigned to shoot M.G.M.'s adaptation of Don Marquis' "Old Soak." There was reported to have been some lively competition among the boys to land in the spot, some even exploiting their asserted qualifications adequately to fill the bill. The department, however, insisted it was seeking its man on the dry's side of the fence. But the roar of the cinematographers was as nothing to that coming from the character actors. Some of the troupers insisted they could fill the title role like nobody's business if the prop department would just do its full duty.

● **Fred W. Jackman, A.S.C.**, had a plenty of good long looks at the old Father of Waters on damage bent. Preceded by his son **Fred W. Jackman, Jr., A.S.C.**, he flew from Hollywood to St. Louis with Amelia Earhart on the plane in which she plans a world flight. Arriving in St. Louis the two A.S.C. members chartered a plane and photographed the flooded area, proceeding as far south as Memphis. In Paducah, Ky., they entered the lobby of the Irving Cobb Hotel in a motorboat. In another town also in a motorboat they entered a hotel via a second story window and departed in the same novel fashion. Father and son returned to Hollywood by a TWA plane after having been away a week.

● **Joseph Walker, A.S.C.**, among his associates in the Columbia studios for several weeks had built up quite a mystery around his goings and comings in the then near future. He was going east on most important business. He re-

Continued on page 104

CHAMPION

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EASTMAN SUPER X
PANCHROMATIC NEGATIVE

Lighting Shirley Temple

Continued from page 94

way or the other, covering it up with some bit of impromptu business.

Naturally, we try to avoid such things as much as possible. In the first place, we're fond of Shirley. In the second place, no child can be wholly natural under blinding lights.

So we've evolved a scheme of lighting that really gives an indication of what modern lamps and modern fast emulsions permit us to do in cutting down illumination without sacrificing quality. I've always considered myself a reasonably low-level lighter. But it took this experience to show me how far all of us are from taking full advantage of the opportunities offered by today's improved equipment and materials.

Here's the problem. I've got to light Shirley with the minimum possible intensity. At the same time, my scene must retain a definite effect of brilliance. The overall effect may be high-key or low-key; but there must always be something of the sparkle one associates with Shirley Temple.

Baby Spots for Shirley

Therefore the foundation of my lighting scheme is a pair of baby spotlights with which I light Shirley. Yes, I mean those insignificant 500-watt "bon-bons." One of them, placed quite high and at the side most of Shirley's action is played to, is my key-light. Normally, it shines down upon her face, from the front.

The second baby spot fills in from the side. It is usually lower than the key-light, and flooded more. The remaining side is filled in with a "brood," strongly diffused and placed well back. The top and back lighting, since Shirley doesn't have to face it, can if necessary be much stronger. Often in closer shots, however, I use a baby spot even for this.

Now all I've got to do is keep my general illumination at a sufficiently low level so that these "babies" penetrate the overall lighting.

For this I've found one of the most valuable tools is the "Junior Solarspot" Male-Richardson brought out last year. In a case like this, you've got to light precisely. Each lamp must do its full

duty—and no more. You can't trust to diffusing heavily, for if you do your light grows hard to control. You can't work precisely with the old mirror-type lamps because of the obvious "hot rings" and "dark centers" you get as soon as you flood their beams.

Here is where the "Morinc-lens" construction of those Solarspots proves its worth. I haven't yet been able to find any shadows or hot-spots in their beams. And once you've focused a Junior you know its beam is all going where you want it. There's no "spilled light."

Larger Lamps for Adults

What's more to the point, I don't have to use two or three overdiffused lamps to do the work of one normally efficient one. On several of the sets for "Stowaway" and most of them for the new picture I've had the set rigged exclusively with Solarspots.

In those parts of the scene toward which Shirley doesn't have to look I can often use larger lamps for lighting the adult players. The "Juniors" are very useful for this, particularly since their light can be so precisely controlled.

We've worked out a little gadget which is very helpful in this phase of lighting. We call it a "barndoar." It fits on to the lamp just like a diffuser. On the normal square metal base is a tube the same diameter as the Solarspot's lens, and about three inches long. At the end of this are two hinged flaps about twelve or fourteen inches long. The whole assembly revolves, so that the flaps will close at any angle—vertically, horizontally, or anything between.

The flaps of the barndoar act like gobos, but they can be handled much easier. Suppose Shirley is working in a scene with an older player who needs (and can stand) stronger lighting. Shirley may have to look in the direction of one of these larger lamps. Well, that lamp is simply a Junior with a barndoar.

The flaps of the barndoar are revolved until they work vertically. Then the lower flap is tilted up until it cuts the beam off Shirley. Thus protected, she can look directly at the lamp and not

Our Regrets to Mr. Simon

In a conversation with the editor of this magazine S. Sylvan Simon, Universal executive, called attention to statements credited to him in a January story which he says were not in conformity with his beliefs or his experience. Mr. Simon, whose books on theatrical matters are accepted in the profession as authoritative, says the article in question was written by a free lance writer following a brief and casual chat on a stage. While some of the statements, Mr. Simon suggests, were recognized by his intimates in the industry as authentic, others were to the contrary. The American Cinematographer begs to assure Mr. Simon it regrets the occasion for complaint.

be bothered. Moreover, it cannot interfere with the less intense lighting used on Shirley.

It can easily be imagined, too, how much these handy accessories simplify the matter of goboeing light from any part of the set.

Same Problem Outdoors

When we go outdoors on location the same general problem enters. I always scrim the direct sunlight from Shirley. And as even experienced adults dislike facing reflectors I do all my modeling with artificial light. Usually I employ Solarspots and baby spots.

On this picture, we have one location representing a canyon in Indio. Here we've had the problem of suggesting heat without building up unduly "hot" light levels. One sequence, for instance, takes place on the veranda of an officer's bungalow. I needed plenty of light in that porch to balance the strong sunlight outside. Ordinary inkies weren't adequate, and the sound men wouldn't let us use a generator big enough to power arcs. So I used one of the big Senior Solarspots—and the trick was done.

In one sequence of the last picture, "Stowaway," I also made good use of these larger units. The set represented the deck of a steamship, and I needed a strong, uniform key-light to represent sunlight. The answer was three Seniors lined up outside, overlapping at the stanchions supporting the upper deck. The effect could not have been more convincing had I used arcs—and it was done easily and economically.

But somehow the technicalities of lighting don't seem so important when I'm shooting a scene like one in "Stowaway" which ran for over three pages of dialog. It's quite something to see any seven-year-old do such a long scene without missing a line—but when fully half of her dialog is in Chinese (and still never a blow-up!)—well, even a cinematographer has a right to applaud!

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"Michael Strogoff" Registers Genuine Triumph in Technique

VERNON L. WALKER, A.S.C., head of the special camera effects department at RKO studios, replied to the compliments of the editor on the work of his department and the whole camera crew on the making of "Michael Strogoff" by declaring with enthusiasm that Joseph August, A.S.C., the director of photography on the picture, had "done a beautiful job, that he had matched right on the button the foreign land shots with the home close-ups; that not only was there craftsmanship but artistry in abundance."

One of the outstanding incidents in connection with the making of "Michael Strogoff" is that, where ordinarily the producer for some conceivable reason attempts to hide the fact o picture was photographed abroad, in the present instance there is open-handed acknowledgement by an RKO executive whose business it is to speak for the company that RKO purchased a French version of a German picture that had been photographed in Bulgaria.

Furthermore, explaining the conviction of "authority" conveyed to the person out front as he looks on these wide vistas of open country, it is declared that of the original nine reels brought to this country 2800 feet were cut into the picture as it is now being shown. That explains why the layman is under the illusion he is looking on Russian backgrounds.

Photographic Technique

Let us examine the map and see how this illusion thing was established. Southern Russia is bounded on the west by the Black Sea. As this witness construed the locale from the picture this was the spot, Bulgaria, where it was photographed, is bounded on the east by the same body of water. The latter country's latitude—and latitude is a most important factor in matching backgrounds—is around 42 north. Sacramento River, where some of the matching shots were taken, is 39. Here in Triunfo, an hour's easy ride from Los Angeles, where some of the most effective matching was done, the latitude was around 33. It is probable the disparity in latitude was compensated for by the elevation of the Triunfo location.

What cannot be ignored wherever motion picture men and women together is that one of the major factors contributing to the triumph of a production—its transformation from perhaps a subject that may have been

ordinarily "just another picture" into one of unquestioned box office value and human appeal—is in the work of its photographers, the men who took a subject that had been made under the technique of a decade ago and by the employment of the most modern devices and implements and the highest degree of technical skill gave to the world a picture that will rank in the



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upper brackets of successful productions. Photographers, amateurs as well as professionals, will be interested in more than the technical excellencies of this Jules Verne subject of the period of 1870. Without a moment's warning, there is suddenly pitchforked into the consciousness of the screen follower the face of a woman, a mother, the mother of Michael Strogoff. It is a foce of tragedy, one that in its depth, its poignancy, will overmatch anything this reporter ever has seen on the screen.

Strongly enough, this is the second picture in which Fay Bainter has worked. Her first one, "Quality Street," has not yet been released. It is a singular occurrence when a player makes a tenstrike in her second picture, with the first one yet to come and to reap the inevitable reward awaiting it by reason of the sudden screen eminence of one of its actors whose quality as a portrayer of life hitherto had been known only to the followers of the stage.

Film Exports Gain Ten Million Feet Over Previous Year

Preliminary figures of American motion picture film exports for the year 1936 show a 10,000,000 feet increase in negative and positive sound and silent films over those exported during 1935, according to compilations made by Nathan D. Golden, chief of the Motion Picture Section of the Electrical Division, Bureau of Foreign and Domestic Commerce.

For 1936 a total of 209,651,404 linear feet of motion picture film, with a declared value of \$4,531,639 were exported to 101 markets throughout the world, as compared with 190,690,621 linear feet, valued at \$4,597,339 for 1935.

The 1936 exports of motion picture film are the largest since the year 1930, when 274 million feet of film were exported.

During 1936 exports of negative and positive sound film to the three leading markets were in the following order:

Argentina, as in 1935, was the largest consumer of American motion pictures in point of footage.

Second in point of footage, but still our best revenue producing market, is the United Kingdom, importing during 1936 18,071,389 feet, valued at \$525,-031, as compared with 15,874,353 feet with a value of \$476,392 during 1935.

Brazil again maintains third position as a leading consumer of American pictures. During 1936 it imported 12,-785,110 feet of films from the United States, valued at \$252,655, as compared with 11,568,669 feet, valued at \$247,-125 for 1935.



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They Make Pictures in India

Continued from page 91

G. Quiribet, who succeeded Hal Sintz-enich, A.S.C., as technical advisor for Kodak, Ltd., in Bombay, and Agfa's capable consultant, Mr. Hirlekar, have done excellent work in helping the Indian studios to modernize their laboratories. In spite of their efforts, however, some of the smaller plants have fine developing machines which are left unused in favor of the more traditional rack-and-tray systems.

India really needs coaching in American cutting technique, too. Although their editing is artistically satisfactory, their methods of handling the film are too often slipshod. Often, you will find a cutting room floor completely covered with film—positive or negative—while the cutter sits cross-legged and works with bare hands. Inevitably, virtually all Indian pictures are seriously blighted by dirt and scratches.

Waxing machines, too, could be used more advantageously. Too often the film is not waxed, and the first projectionist who uses a print spoils it by lubricating it with projector oil.

The average Indian production is from 12 to 18 reels in length, either of an Indian mythological or historical subject, or an Indianized adaptation of a modern Hollywoodesque subject. The tempo is usually quite slow-moving. Sometimes a single song will last a full reel.

Six Weeks For Majors

Production schedules and budgets are the most nearly American of any in the Orient. The average major production has a schedule of from six weeks to two months or more, and budgets up to as high as 150,000 rupees, which is about \$65,000. This is six or seven times what would be spent on a feature in Japan or the Philippines. The returns are proportional, for where an Indian city may have one theatre playing American and European films it will have a score playing native productions.

Altogether, the Indian film industry is advancing. The Motion Picture Society of India is doing a great work in fostering cooperation among its technicians, immensely aided by Kodak's Quiribet and Agfa's Brunn and Hirlekar. Such American journals as *The Cinematographer* do much to help India's photographers keep up with the times.

It is unfortunate that so few from India have had a chance to receive training in Hollywood's studios, for such cooperation would be mutually advantageous, and would help a very sincere group of artists in their efforts to make better pictures for a huge audience which, due to the language barrier, can rarely patronize Hollywood's pictures.

New Type Infra-Red

Continued from page 96

Paramount, pioneering the use of this film, has repainted its entire "Brownstone Street" in a special bluish-gray. This color has been standardized under the name "infra-red blue." It is equally good for day scenes and infro-red night scenes. It has no red in its composition.

Two reds may be identical both to eye and to normal super-panchromatic films, but with the new infro-red film one may photograph dark, due to an imperceptible bluish content, while the other will be rendered light. Certain natural greens reflect a surprising amount of infro-red and accordingly photograph unnaturally white with this film.

One production in which it is planned to use the new film is taking this into account, and much of the location's natural foliage will be sprayed a more satisfactory photographic green to prevent mishaps.

Wilkinson is pursuing a remarkably for-sighted policy in making use of this film. While fully aware to the photographic and economic advantages of the film, and definitely planning its use wherever advisable (one production alone has night sequences which will expose more than 20,000 feet of the new stock), Wilkinson is making no effort to force its use upon Cinematographers unacquainted with the film. Every member of the Paramount staff is given an opportunity to study the tests already made, to make more of his own—and then to use his best judgment.

It is a tribute to both that policy and the new film that the Cinematographers who have seen and tested it are without exception anxious to use it on their own productions.

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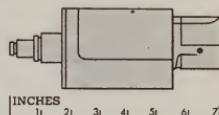
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A.S.C. On Parade

Continued from page 98

quested, in fact most urgently requested, that for several weeks or even a month, he be relieved of any assignments. He got the relief, but the curiosity of the bunch was unsatisfied.

Then one fine morning Joe burst in on the department after parking a shiny car. With him were Mr. and Mrs. Frank Capra and Miss Juonita Pollard. Joe admitted he was on his way to get married. But first he had an appointment to look in on Harry Cahn, who slipped the cinematographer a bouquet that made his eyes snap.

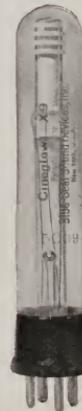
Then Joe walked out on the studio, leaving his amazed associates entirely flat. Nor have they seen him since. It was learned later he did get married and that he and his bride left immediately for New York. Mrs. Walker is an expert amateur photographe. So it is to be assumed that when Joe gets back on the job he will be extra careful of his lighting.

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Next Month . . .

Next month readers of the Amateur Movie Section will find entertainment and information in an interview by **William Stull, A.S.C.**, with one of the outstanding amateur photographers in the country.

So also may possibly followers of the Professional Section, for the man interviewed, while an amateur, has traveled far—over the waters of the world and in the progress of his hobby. We haven't seen the story, but we know the two men and their work.



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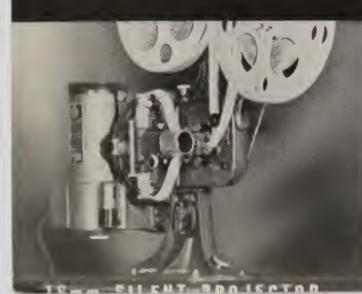
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"King of Allah's Garden" Is Bay State Movie

by
Mr. and Mrs. Stanley Oscar Bean

ALTHOUGH THERE is some similarity to our title and that of a very excellent recent technicolor film, our story is as different as is the idea behind it.

With nine years of 16mm fun and experience in making four travel, two industrial, two Kodachrome shorts and one historical production, we wanted to do a feature length photoplay.

After a visit to Hollywood studios and outdoor locations in 1933, we wondered what we might do here in our own "back yard," using New England's varied seasons and natural locations.

The scenario was our own—concerning the difficulties confronting a British telegraph company in maintaining communications between Uganda and the Sudan. A story requiring such foreign locale—Africa's desert, veldt and jungle—was written with the object of demonstrating to

THE WRITERS of this story, Stanley and Maryjane Bean, of Amesbury, Mass., admit the subject they have here described is a 16mm production with a definite purpose. As in the early days of the screen the new and necessarily hard-pushed professional picture producers used the locale of Fort Lee in New Jersey as a background for wild western tales, so these New Englanders created African desert, veldt and jungle out of their forests and sand dunes tumbled about by a raging wintry Atlantic. Among bodies with which Mr. Bean is connected are the Stanart Motion Picture Club and the National Geographic Club. The writers also make no attempt to conceal that what began as a hobby may prove to be something else again—but nevertheless with them the making of pictures continues to be a hobby.

our audiences the cinema possibilities of our northeastern states.

With five on the production staff and nine in the cast we went out to prove our point—a little of Hollywood in New England.

Our desert was several acres of rolling sand on an island bounded by the stormy Atlantic. We began the desert photography in March after the winter's winds had built large dunes and smoothed the surface of its few wild grasses. The sun at this time of year gave us long shadows in early afternoon.

Jungle a Swamp

Our jungle was comprised of a swampy woodland, completely overgrown with wild grapes and a wicked, thorn-covered vine locally called "devil-wire." Through this "hardly penetrable jungle" we cut paths where the action was to take place. These scenes were completed before telltale leaves had even budded.

In both jungle and desert backgrounds we were able to work without recognizable native plants or trees breaking the atmosphere. We did a number of scenes in Kodachrome, to capture the vivid colors which our warm spring months supply—to duplicate, if possible, the gorgeous hues of late-afternoon reflections on glistening sand and the rich verdure of the tropics.

Our oasis and veldt were most difficult to obtain. To prove our point we could not resort to artificial settings or make use of props. A large spring near a brook was the ideal water-hole except for its background—elm and pine trees! The shooting angle was overcome by erecting a platform from which we could follow the action using a range only to the base of the trees. We played up the close-range features of our "oasis," which was overhung with long grasses and a number of giant ferns, as the "native" villain skulked before the lens.

Next, the scenario called for a long-shot with a wide frontage of "open veldt." We went back along the sea coast, but each spot visited continually balked us with familiar and too numerous trees in the foreground.

"Fort" is Written In

A member of the cast suggested an airfield not far from a beach which was grass covered, although always mown. We visited the spot which was ideal—at least a half-mile wide and an unbroken vista for two miles, with only sparsely placed scrub growth breaking the skyline. We waited till late autumn however to make these scenes when all machine marks were obliterated.

Perhaps the most interesting filming was that of "Fort Cecil," the scene of considerable action. We had had this place in mind long before "The King of Allah's Garden"

Continued on page 127



Stanley and Maryjane Bean, authors and producers of the 16mm "The King of Allah's Garden." The picture was shot from film. The location is the New England coast and was designed to simulate an African desert.

Coaching an Olympic Team with 16mm Movies

DESPITE HIS NICKNAME, I don't think Harold ("Dutch") Smith was exactly a master of the German language last spring when he signed up to coach Germany's Olympic diving team. It was reasonably certain, too, that many of his pupils would not understand English. Under such circumstances, conversation just isn't, and teaching becomes a matter of pantomime.

Unfortunately, the kind of fancy diving that makes up the required routine of the Olympiad doesn't particularly lend itself to accurate pantomime. Even if, like "Dutch," you are an Olympic champion and can do all the dives to perfection, it takes more than pantomime or demonstration to put over the fact that in one dive, just as you are three-quarters through your second backward somersault, you throw your head forward, while in another dive which looks almost exactly like the first, you throw your head backward.

Those things happen so fast in a dive . . . and not even an Olympic champion can dive in slow-motion!

Slow motion! So, there was an idea—movies! So "Dutch" rounded up me and my Filmo, and we set to work to make a slow-motion picture of the complete Olympic diving routine, the first time this had been done.

Diving By Script

First of all, we prepared a skeleton scenario for our picture. This was simply a list of the required dives, in the order they follow in Olympic competition. This didn't have to be very detailed, for Dutch knows the dives and their order by heart. When we got to the actual shooting, perhaps once in ten or a dozen dives, Dutch would glance at the script to see what dive came next.

The script was intended mainly as a guide to me, both in planning my shots and in editing the finished picture. Believe me, I needed it, for there were no less than eighty different dives, and some of them look mighty alike if you're not an expert.

At any rate, we prepared our script ("Catalog would be more correct," remarks the Mrs.), and repaired to the



Harold ("Dutch") Smith and "script girl" on location.

by
J. Robert Hubbard

El Mirador plunge at Palm Springs to make our picture. Dutch Smith worked a triple play as cast, director and producer. My motor-driven Filmo and I were photographic staff, reinforced by 1500 feet of Panchromatic reversal film. Mrs. Hubbard went along for the ride—and was pressed into service as "script girl."

Inconspicuous Backgrounds

One of the most important things in making a film of this nature is to have an inconspicuous background. Scenery, fine architecture and pretty girl bathers are all right, but any of them would tend to distract attention from the niceties of fancy diving technique. We were rather lucky.

Dutch is universally liked, and when the bathers learned what he was trying to do they agreed to stay at the other end of the pool, well out of the picture. Behind the springboards was a fairly high stucco wall, which made an excellent background for the lower shots. Beyond the wall was a group of dark green trees, the only undesirable feature of the location from our viewpoint.

Beyond this there was only the clear blue sky as a background—no buildings, telephone-poles, or distant traffic to confuse our shots.

The neutral tone of the stucco wall was perfect for a background—as far as it went. The sky was brought to just the right neutral gray tone with a 4x yellow filter. The only disturbing element was the dark green foliage in between. For a while we considered putting up a white canvas backstop to conceal this, but finally we decided against it, the day was windy and sure to ripple the canvas embarrassingly.

The 4x filter, incidentally, was useful in another way. Dutch, after a season in the open under Palm Springs' desert suns, was tanned to a magnificent dark bronze. The filter lightened this tan sufficiently to show it as a tan, but not as absolute blackness.

Two Days' Shooting

With the exception of two or three close shots showing such details as the correct way to hold the hands, the proper walking and running approaches along the springboard and the like, we shot our entire picture at the "slow-motion" speed of 64 frames a second.

This, while it may not be as perfect for slowing down diving as the 128-frame speed of the special super-speed Filmo, proved completely satisfactory. It had the advantage of being more economical of film, and it is always possible, when one wants to study such movement closer, to slow the projector and increase the apparent "slow-motion" effect.

Using regular Panchromatic reversal film and the 4x filter, the exposures ranged from f:4 to f:4.5. This was a necessary compromise in exposure between the low exposure indicated for the sky and the brilliantly reflective

water of the pool and the much higher exposure indicated for Smith's bronzed body.

We worked for two solid days photographing our dives. Fortunately, the pool was so situated that we got a good cross-light both morning and afternoon. This lighting was almost perfect for our purpose, for it gave a very pleasant modeling on Dutch's figure, with enough high-lighted area to contrast well with all parts of the background.

This is important, for unless the background is a single expanse of one neutral tone and the diver properly lit, there is always the danger that at some point in the scene the diver's body may seem to merge into the background, losing important technical details.

Filmed With One-Inch Lens

All of the dives were shown in long-shots, which were filmed with a standard f:2.7 Cooke lens of 25mm (one inch) focus. One or two shots illustrating special details, such as foot-action on the springboard, were made with two-inch and four-inch telephoto lenses; but speaking generally a one-inch lens is all that one needs for this work.

Thorough rehearsal is necessary if pictures like these are to be of value. Our routine was simple enough: Dutch would practice each dive until he felt he was at top form, and I would practice "following" his movement through the finder until I was sure I could make the shot perfectly. Then we'd make the scene. If the dive wasn't perfect, we would retake it. If it was, we'd go on to the next dive.

When you see these dives on the screen, with Dutch floating through them in slow-motion, it looks as though it must have been easy to follow the movements with a one-inch lens. Actually, it was quite hard—especially with the more intricate dives from the three-meter board.

The dive actually was four times as fast as it appears on the screen, and shooting a big fellow like Dutch doing a double somersault with a couple of twists thrown in—and doing it without leaving a few arms and legs out of the picture—is definitely a tricky task.

Script Helps in Editing

As we filmed each dive the script girl checked it off against the list in the script, noting how many "takes" we made of each, and which one was the okehed one.

When the film came back from the laboratory, we broke it down into individual scenes and eliminated the NG'd takes. Then we arranged the dives in their correct order and started splicing. Most of the dives had been shot in their proper order; but a few of the more intricate ones toward the end of the first day's shooting had been postponed until the next morning, when Dutch felt fresher, and could do them better.

The picture's total length was about 780 feet, which included eighty dives and as many titles. The film, though one continuous production, was broken up into two reels. Reel One is devoted to dives from the low (one-meter) board. Reel Two is devoted to the dives from the three-meter (ten-foot) board. The former scenes were all made from a normal eye-level viewpoint.

The scenes of the dives from the higher board were made from a viewpoint about even with the high board. Since at the start of the picture we showed close shots of the proper approaches to the springboard, both walking and running and such details, we saved a good deal of footage by only showing the dives themselves.

Titles Kept Simple

Since the film was made to aid in coaching divers who might not know much English, we kept the titles very simple. Naturally, we had to collaborate on them. Dutch noted down the proper name of each dive and any notes on form he thought fit. Then I boiled down the wording

to the minimum. Ultimately, the titles were reduced to a mere statement of the official designation of the dive, and its sub-type, with the briefest of technical notes, such as "Aim inner arm toward point of entry." The picture told the rest of the story.

Diving Films Make Sensation

That, incidentally, gives one a good criterion by which to judge whether or not he has been successful in making a picture of this type. If you find your film needs long-winded explanatory titles to make its meaning clear, the man at the camera has failed. After all, the only reason for making a picture is to tell something that can't be told across with mere words. If the picture needs wordy titles to complete its story, you can take it as a clear signal something is wrong with the picturmaking.

The way the athletic world has received the picture surprised both of us. We realized it was the first time all of the Olympic dives had been recorded on film for a study of diving technique, but we hadn't expected to create such a sensation. The Germans, of course, were enthusiastic.

Colleges Buy Prints

Then, after the Olympic Games, a University in Johannesburg, South Africa, asked to buy a print. Here in this country coaches at Yale, Princeton, Stanford and many other colleges have followed suit, with more heard from almost daily. Fortunately, after cutting the original reversal film, we had made a duplicate negative, so all prints are equally good, without scratches or any signs of projection-wear such as would have been inevitable had we not made the dupe negative at once.

Making this picture was mighty interesting, but if you imagine it was play, consider this. Counting rehearsals, extra takes, and all, Dutch Smith did well over 200 dives to give the 80 perfect ones shown in the picture. Well over half of these were done from the high board, and in addition to diving Dutch had to climb more than ten feet up to the board each time.

When we finished those dives, Irving Berlin, who was an interested spectator, figured that in addition to his diving, Dutch had climbed nearly half a mile straight up—just getting out of the water!

As if that wasn't enough for him, after the day's work was through, Dutch would remark with a grin: "Come on, Bob, the water's fine!" And we would spend half an hour swimming and diving—just for fun.



"Dutch" Smith on his way to the water.

YOU HEAR A LOT about the subject of "transitions" in discussions of professional movies. When you go to the theatre you often see so many intricate "wipes," "montages" and such that you are likely to limit your thoughts of transitions to these tricks, and then to dismiss the whole subject as something too involved for amateur filming.

Same of these intricacies are, it must be admitted, rather beyond the scope of any amateur except perhaps the fellow with a Cine-Kodak Special and a wad of patience. But they are by no means the whole of transitions.

The truth of the matter is that as long as we make movies, professional or amateur, we simply can't help making transitions. Every time we end one scene and start another we've made a transition. Every time we splice two scenes together we've made a transition. Every time we join two groups of scenes together we've made a transition.

Reduced to the simplest terms, a transition is a change from one filmed idea to another. That idea may be subject-matter, place, time or action. The change may be great or small. On the screen, it can be abrupt or smooth—quick or gradual, according to how one handles his transition.

Direct Cut Simplest Transition

The most elementary transition is the direct cut. It is also the most abrupt, and it can be the most confusing. At one moment one scene may be on the screen; a sixteenth of a second later something entirely different may be screening.

This is the logical transition to use between closely related individual scenes. When you cut from a long-shot of a given action to a closer shot of the same action, the transition is excellent, for there is no waste motion—no time lost. When from a shot of one person doing or saying something you cut to a shot of another person obviously watching him or listening, again the transition is good, for you've taken the quickest and most direct way.

On the other hand, if you try to use direct cuts between sequences, you are likely to confuse the audience, unless the action or setting of the sequences is very closely related. Such a transition is so abrupt a person watching it on the screen has no time to readjust his mind from one line of thought to the other.

Fades

The fade-out and fade-in are the most all-round useful of all transitions. The fade-out is as positive as the period at the end of a sentence. It says beyond contradiction, "This is the end of this idea." The fade-in is just as positive. It asserts, "Here comes a new idea—be ready for it!"



Two strips of waterproof masking tape and fading chemicals will make a wipe like this.

If You Make Movies, Amateur Or Professional,

By William

Used together, the fade-out and the fade-in give a smooth and positive change from one thought to another, and at the same time give the auditors that fraction of a second's pause necessary to readjust their minds from one train of thought to another.

Fortunately, fades are among the easiest transitions to make, whether you make them in the camera, or after the film is processed.

The simplest way to make a fade in the camera is by closing or opening the lens. But if you are shooting outdoors, with your lens already well stopped down, you've very little leeway left for fading—not enough, certainly, to fade completely out. In an f:16 light, for instance, you'll still get too much exposure for the dark end of your fade even if the lens is closed to its smallest stop, which with sub-standard lenses is usually about f:22.

If you were using a filter you would probably have your lens much wider open, and you could get a definite fade: but your scene may not always call for a filter. An easy way to get around this is to use a Neutral Density filter—one which has no coloring to affect the color-rendition of your scene, but is simply a dense gray-black, to affect exposure-values and lessen contrast. In an f:16 light, if you use for example a 1.00 Neutral Density filter, you will have to shoot with your lens opened to f:5.1 to get the same relative exposure. This gives ample range for lens-fades.

The various fading-glasses on the market are simply graduated Neutral Density filters which can be moved across the lens to make a fade.

Making Fades On Finished Film

A year or two ago the sub-standard filer who, after he had shot his picture, discovered that he wanted fades was out of luck. Dr. Loyd Jones, A.S.C., of the Kodak Research Laboratory, had evolved a formula which produced fades chemically on developed positive or reversal film, but the chemicals were hard to get. I was unable to obtain them even in Hollywood; and though substitutes were available, they were like most substitutes, and didn't work so satisfactorily.

Since then the man I tried to get those dyes from, T. R. Barabee of the Dye Research Laboratories, has devised a compound that enables anyone to make his own fades easily. It is marketed as "Fotofade." You simply add the proper amount of water to the dry chemicals, and your solution is ready. Wet your film in water for a half a minute and clip a weight at the end you want darkest in your fade.

Then drop the weighted end into the solution frame by frame. When your fade is long enough, give the film a

You Just Can't Help Doing These Transition Things

Stull, A.S.C.

shake and pull it out quickly. Rinse it in clear water (preferably circulating) for fifteen or twenty seconds, squeeze the film between moist chamois—and when the film is dry you will have a perfect fade. It's as simple as that!

Lap Dissolves

The lap-dissolve is an extension of the fade-out and fade-in combination, with the fades superimposed. Unfortunately, it has to be done in the camera. If your camera is one of the many not equipped to wind the film backwards, you can still make dissolves—if you will work painstakingly and carefully.

First, you mark a definite starting point on the film. An easy way to do this is to remove the lens and mark crosses on several frames with a grease-pencil. Then you make your scene in the usual way, carefully counting off the footage. Suppose your scene runs five feet, and then you fade out in two more feet. Very well, put on your lens-cap, and run the rest of the roll through, unexposed.

Now rewind the film. Bring it back to the starting-point you marked. Again with the lens-cap over the lens, run through the five feet of your scene, checking this either by counts or by watching the footage meter, if your camera has an accurate one. When you are set up on the next scene make your fade-in as usual, carefully keeping it to the same length as the previously exposed fade-out. If you have done things accurately you will have a perfect lap-dissolve.

Dissolves on Finished Film

Obviously, you can't make a lap-dissolve chemically on finished film. In an emergency, though, it is possible to make them by a modification of optical printing. Project your scene, frame by frame, on a sheet of ground glass, and rephotograph it with a camera on the other side of the screen, exposing one frame at a time in stop motion. You will have to give the film in the projector a half-turn, so that the dissolve will be correct as to right and left. You will also be likely to have some difficulty in accurately matching the contrast of your "dubed" scenes.

This single-frame work is very slow, so it is a good idea to make only the lap itself this way, with possibly a few frames at each end to simplify the matter of cutting it into its proper place.

The dissolve is a rather tricky thing to use, however, for it is such an unobtrusive transition that it should be used only between ideas that are closely related. If it is used to join unrelated ideas, it can be even more confusing than a direct cut, for the change of thought sneaks up and catches the audience unawares.

An interesting variation, used by several competitors in the various Cinematographer Contests, is to fade out in the usual manner and then, instead of lopping it with a fade-in, bring the following scene in with the old-fashioned "iris-in" effect produced by such devices as the Filmo "Iris Vignetter."

Wipes

The "wipe" in its various forms is an interesting transition, but one that must be used sparingly. It is definitely a trick, and it usually calls attention to itself.

Simple wipes can be made by sliding a dark card over the lens, far enough forward to give a reasonably sharp line. If your camera will wind back, you can, with care, make one scene wipe its predecessor off the screen. Otherwise, you can have both scenes wipe in the same direction, with a black interlude between. You can have one scene wipe out in one direction—say, sideways—and the other wipe in from another, say, up from the bottom, or at an angle.

A mechanical wiper like the Dumarr is very helpful in making these tricky transitions smoothly.

Chemical Wipes

Where a wipe involves the scene being wiped off by blackness, Fotofade is perhaps the easiest method of getting good wipes. In this case, you simply cover the part of the film you want clear with waterproof masking tape and soak the film in Fotofade for two minutes.

The tape must be applied on the emulsion side of the film, of course, and it must be pressed down firmly, so the solution can't creep under the edge and give a blurred line.

If you apply two parallel strips, about one frame apart, and placed diagonally, you will have both wipes traveling in the same direction. If one tape slants in one direction, and the other in the opposite direction, the two wipes will be in opposite directions. If two tapes are crossed, the wipe will begin in the center of the picture and spread outward. To have the wipe start at the corners and spread inward, use a long narrow V of tape. Using such a wipe where two scenes are spliced together, you can block out the splice completely by making the wipe after the scenes are spliced.

Subjective Transitions

All told, we have a pretty complete vocabulary of transitions. There are direct cuts for quick changes between closely related shots. There is the fade-out and its companion

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A wipe like this is a quick, positive transition, but calls attention to camera trickery.



AMATEUR MOVIE CLUB NEWS

Los Angeles 8mm Club Turns Out in Force for Excellent Program

THE STATED MEETING of the Los Angeles 8mm Club was held in the Bell and Howell Auditorium, 716 North La Brea avenue, February 9. Dr. F. R. Loscher, the president, was in the chair. Nearly 150 were present.

The session was notable for the showing of two unusual amateur subjects, a travelogue in color by John E. Walter portraying the scenic beauties of the Northwest and a pictorial presentation by Robert W. Teorey, First Sergeant of Marines, of the President's 16,000-mile trip to South America.

Bian Vogel, Randolph B. Clardy and C. W. A. Cadarette were named as a technical committee to give advice across a ten-minute period. The men named also will judge and analyze such films as members may submit to them.

Mr. Clardy, a commercial artist, was appointed club artist, to have supervision of art work, designs and advertising. E. J. Brouillette was named corresponding secretary, a new office made necessary by the increasing membership. The ten members admitted since the first of the year brings the total to seventy.

It was decided to rent the 8mm version of "The Covered Wagon," in six reels, for study of photography, cutting and titling technique. In order to cover the cost each one attending will be asked to contribute a dime.

The president announced the publication of a club magazine. It will make its appearance under the title of *Thru the Filter*. In a circular prepared for the members suggestions are made for contributions regarding some pet gadget, ideas for club advancement, committee reports, tire saving kinks, etc. At the beginning it was the impression the new-comer would be a quarterly.

William C. Wade, chairman of the leader strip committee, presented each member two printed cards with the wording "Member Los Angeles 8mm Club," one on white stock for panchromatic film and the other on blue stock for kodachrome film. They are designed to be used, as is in more detail set forth in another column of this issue, in the members' titles.

At the request of the president, the retiring editor of the American Cinematographer, Charles J. VerHalen, presented George Blaisdell, his successor, who briefly responded.

One of the features of the evening was the contest showing of three films photographed by wives of members. These were Mrs. Alva Cadarette, who presented "They'll Do It Every Time"; Mrs. Arthur Svenson, "Smudge Smoke," and Mrs. Aleander Leitch, "A Day on the Range." The judges made the awards in the order named. The subjects displayed merit and were followed with particular interest by the men, who appeared to look upon them as a threat to their own standing in their own photographic world.

C. G. Cornell showed "Wifey's Away," a comedy awarded fourth prize in the December contest.

Mr. Walter contributed in a large degree to the pleasure of the meeting when he showed his three-reel Kodachrome "1936 Travelogue," the filmed story of a journey along the Pacific coast and into the northwestern portion of the country. It was worth the walking of a mile for any one to get a peek at the beauties unfolded by the artistic photographer.

The final subject on the program was something far out of the ordinary in the way of pictures amateur or professional. It was contributed by First Sergeant Teorey. It was titled "The Cruise of the U.S.S. Chester to South America;" and was in three reels, 8mm. The Sergeant was stationed on the Chester, the convoy of the President's Indianapolis. Like its immediate predecessor on the screen it was heartily applauded.

The meeting adjourned at 11:30.

Littles' Eighth Movie Party Will Draw on Nine Countries

The eighth annual movie party is slated to be held in New York, April 2. For it Mr. and Mrs. Duncan MacD. Little have issued eighty invitations to friends living in ten states, three Canadian provinces and seven foreign countries. Forty of the number are confined to the metropolitan district.

The setting for the party is the Salles des Artistes, 1 West Sixty-seventh street, New York. The program is restricted to amateur motion picture films. These will have been produced by the guests of the evening. Owing to the large and increasing number of films now being submitted for this outstanding amateur exhibition it has been found necessary to leave to an independent committee the selection of the subjects to be shown.

No restrictions are imposed by the Littles as to subject, classification or length, except that it was preferred, owing to limited time, no entries exceed the easy capacity of a 400-foot 16mm reel or a 200-foot 8mm. No consideration can be extended to a 35mm subject. The final date for receipt of entries was February 27.

Competition in the showings always has been scrupulously avoided. Selection will not mean the films to be screened are in any sense better than those not selected. It will mean the judges have attempted to provide what they consider an interesting program for entertainment of the guests. Following the selection of the films musical backgrounds also were to be chosen.

In other years travelogues have been in the majority of the films submitted. Among other subjects shown have been melodramas, international sports events, semi-industrials, comedies, African hunting, archeological discovery, current historical events of local interest (local to other places as well as to New York) and such unique things as

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CINÉ-KODAK•E
with f.3.5 Lens, 3 Speeds



KODASCOPE•EE
with "Tailor-made Projection"



\$108 buys this complete new 16 mm. outfit

FIXED-FOCUS, the 16 mm. Model E is fitted with the famous Kodak Anastigmat f.3.5 lens which focuses sharply on all objects from a few feet distant to infinity. The "E" may be operated at any of three speeds—Normal, Intermediate, or Slow Motion—16, 32, or 64 frames per second. Exclusive with the Model E is its new-type enclosed eye-level finder. When you sight with it you see both image and footage by means of a supplementary footage indicator at the side of the finder image. And, because of the "E's" angled top, you need not take off your hat when sighting. Single-plane loading, a simplified gate, and ample finger room greatly facilitate loading with 50- or 100-foot rolls of Ciné-Kodak "Pan," Super Sensitive "Pan," Ciné-Kodak Safety, daylight Kodachrome, or Type A Kodachrome Film for Photoflood light.

Added Advantages

The "E's" exposure lever may be pressed down into locking position so that the operator may get into the picture himself when the camera is set on a flat surface or affixed to Ciné-Kodak Tripod. The Model E's sturdy die-cast aluminum case promises years of scar-free usefulness. Only \$48.50 at Ciné-Kodak dealers'.

UNDOUBTEDLY the most important feature of the 16 mm. "EE" is projection "tailor-made" to individual projection conditions. The five projection lenses and 400-, 500-, and 750-watt lamps available for the "EE" enable it to supply just the right amount of light for any screen up to 8 feet in width and at distances from 9 to 64 feet.

Projection Table Unnecessary

The base of the Model EE is designed for projection from carrying case top, thus eliminating the need for projection stand or table. Its 30° tilting device permits you to direct the projection throw up or down to a screen on floor or table. The Model EE is extremely cool and quiet in operation—cool, because of its powerful fan and efficient cooling system; quiet, because its six major bearings are permanently lubricated. Its tandem pull-down assures steady projection; its rewind clutch eliminates belt changing.

The price of the "EE" is but \$85.50, including 2-inch f.2.5 lens and 400-watt lamp—a combination supplying ample illumination for average home shows. Here, obviously, is the outstanding projector value in the 16 mm. field. See it at Ciné-Kodak dealers'.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.

Background vs. Foreground Lighting

AFTER VIEWING a number of the splendid films entered in the 1936 contest conducted by the American Society of Cinematographers, I have a comment to offer in regard to the lighting of interior scenes.

It is prompted by the too-evident lack in most of these scenes of what we term balanced lighting. There was a woeful amount of flatness, or lack of depth to the pictures, and little separation of characters in foreground from the supporting background.

The impression gained was that the cine-amateur sets up his lamps on either side of his camera, directs them at the field of the scene and, so long as there is a sufficient quantity of light to make exposure possible, rests content with such general or flood lighting. This is not productive or the best results.

The subject of interior lighting is a big one and can scarcely be set forth in this limited space. Every shot is different and the lighting technique demanded is correspondingly varied. But there are a few fundamental principles that can be applied to the majority of interiors photographed by the amateur.

Two Factors in Composition

It is essential to realize that there are two separate and distinct parts to a pictorial composition as generally used for the screen; the background and the foreground.

Each is important and each contributes its share to the ensemble's effectiveness. They have a definite relationship and, when properly employed, supplement each other. Lighting must be done with this well in mind.

In most interiors filmed by amateurs, characters comprise the foreground and a room of the home furnishes the very acceptable background. Hence, I shall speak of character lighting as compared with background lighting.

Audience interest lies in the actions of your characters. They must be readily seen. They must stand out against the background, not merge into it and become a part of it. This latter effect is exactly what occurs when one blanket of light is used to cover both characters and background.

In making close-ups and close shots of one, two or even three persons, the interest centers in their faces. The background is unimportant, as the locale has been previously established in other and longer shots.

Here, lighting should be concentrated wholly on the close-up faces. When suitable modeling has been obtained by proper disposition of lamps, the spill-over of light to the background is generally sufficient to handle it. The background should purposely be vague, neutral and a supporting but not confusing background to the facial portraits.

When Handling Differs

But on longer shots, as where characters are seen in a room, with its furnishings and walls as background, though: must be given to lighting of the two factors.

The characters, as indicated by the clothing, complexion and hair, will be darker, or lighter in tone than the walls forming the background, or possibly very much the same color. Each condition asks for a different handling.

If the characters are of a darker tone, the background should be lighted with reasonable brilliance while a soft and diffused light plays on the characters. This will accentuate the tonal differentiation and cause the characters to stand out boldly against the background.

When characters are of tone lighter than their surround-

ings, lighting is reversed. Throw just enough light over the background to make it only visible, but concentrate light on the players. Side lighting and back lighting will enhance the characters, with possibly a strong back light to "rim" their figures or faces. Again, the result is to have the individuals revealed in sharp relief against the background.

When tonal values of characters and background are much the same, light must be laid heavier on the characters. From a third to a half more light should be in the foreground than in the background. Here, again, "rim" lighting from the back will be of aid in showing a clear line of demarcation between character and setting.

These applications of light will give depth to the composition, life and luster to the picture, and make the characters real people cleanly etched against an enhancing background.

Balance in Lighting

Throughout, and by far the most difficult for the amateur to achieve, is the important factor of securing balance in the lighting effect on both the foreground and background. Neither should be "burned up" while the other suffers from inadequate light. Highlights on a character's face may often be balanced with deep shadows in the background.

In this work, the cine-amateur will find a few additions to the usual set of lamps to be emphatically useful. Mazda and photoflood bulbs of different sizes will solve many a problem. Reflectors need not be all of one shape or size. By having a variety available, light can better be placed as desired. An assortment of inexpensive tin or aluminum basins, as available at ten-cent stores, makes very acceptable reflectors.

For close-ups and for all head portraits, a baby spotlight is invaluable.

Diffusion of light, which breaks the beams into soft illumination, may easily be secured by simply hanging fabric of the required thinness or even tracing-cloth before the lamps.

Silver or gold reflectors, too, can be used on interiors as well as on exteriors.

Just as you do not always shoot exteriors with the sun directly at your back, so your interiors need not be lighted from immediately behind the camera and at camera level. It is well to have your main source of light well to one side or the other. For the best results, the lamps should always be higher than the camera.

And a word of caution. Doors, painted walls, polished furniture and other flat areas may serve as mirror-like reflectors of your light. Watch for glowing "hot-spots" on them that betray the location of your lamps.

If you will always look upon your characters and your background as two distinct lighting problems, and always light one with consideration for the other, you will avoid one of the commonest of amateur filming errors.

by
John Arnold, A.S.C.

Camera Should Be Instrument of Illusion

TWO VERY interesting films were shown at our recent cine-amateur contest. Both were much the same as to general content; mostly factual, somewhat fictional, they concerned activities of children in the two households with just enough thread of story and continuity to maintain a reasonable degree of audience interest. In short, typical family films such as are being filmed every day in countless homes.

But—what a difference in those two pictures! They are as different in treatment as the personalities of the two men who made them. Which again emphasizes the amazing flexibility and versatility of the modern cine-camera. It responds to every whim and desire of its operator. And that tosses the whole matter of photographic qualities right into the lap of the cinematographer. He gets in his finished pictures exactly what he puts into them.

The first film was shot by a doctor. He made the picture just as he does everything else; from an impersonal, coldly scientific knowledge taken from demonstrated experiences of the past. His focus and exposure are right on the nose; that was to be expected.

What were intended to be photographic portraits of his children appear on the screen as so many clinical studies. Every freckle is revealed in unblushing prominence. Every physiological detail of the cute little faces is frankly exposed. Brilliant light penetrates every wrinkle and dimple. There are no shadows to speak of. The whole film is as imaginative as a hospital case-record.

The second picture was made by a born salesman, bubbling with enthusiasm and imagination. Frankly, he's not as proficient a cameraman as is our infant-usher. Many of his scenes are open to the same criticism that befalls most. Focus could be better, exposure is a little off. But what a wallop his pictures have! Women fairly coo over them.

Every one of his shots is packed with human interest and framed in pleasing composition. His youngsters look like angels from a picture gallery. Shadows fall across the faces, imparting a wistful charm. He chortles happily that his camera "cheats."

It does—and it should. For the greatest and most universal appeal of motion pictures lies in the illusion they create. When devoted to entertainment they are an agency of enhancement, of glamour, of glorification.

Our world would be drab indeed if our mental capacity encompassed only bare truths and shut out hope, imagination and the capacity to attribute to others rare and priceless qualities which may be visible only to our inventive eyes.

So with motion pictures. The very industry is built on fanciful romance and deliberate creation of illusion. Greta Gustafson, in her own personal appearance, mannerisms and words, might or might not be of screen interest. But as the exotic Greta Garbo, in studied hair-dress, make-up and costume, in rehearsed action and speech, she is a fascinating creature millions pay money to see in images secured by shrewd camera application.

Most famed stars, whose galloping images send pulses racing, are, in bathing suit or hospital cot, nothing to send picture postcards home about. It is camera treatment that transforms them to heart-quickeners.

A set may be only a three-sided room of wallboard, but it is a mansion when you see it screened.

by
Frank B. Good, A.S.C.

It all rests with the camera—and the man behind it. Motion picture making consists not so much of taking precise photographs of subjects as it does of creating a pleasing picture from given raw material.

This aggrandizement of character or vista may be achieved without destruction of identity. It is simply, to use the most popular Hollywood term, the injection of "glamour" to the treatment of your subject.

Light is what turns the trick—light, and the way you use it. Hard, harsh white light is severe, penetrating, flattening, all-revealing. Soft, diffused light is kindly, flattering, bewitching.

Photographic light can be and usually is diffused at two points; at the lamp source and also before the lens.

Step on a studio set and you will see scarcely a naked light unit. Diffusing devices of one type or another, to provide definite effects, are everywhere. Some, for further complimentary effects on certain types, are slightly colored.

And a diffusing filter is as standard camera equipment as the lens. It can be safely said that nearly every studio shot is made with the aid of such a filter.

The amateur can profit from these studio standard practices that contribute to screen illusion and personality glorification. Lighting units are not expensive to buy and cheap to make. Have more than sufficient to provide minimum illumination. Have several shapes and sizes of lights and try out various sizes of lamps.

For diffusion, make a simple frame of wire or wood, in it place material of semi-transparent nature that light will shine through—tissue paper, thin oiled paper, cellophane, silk, bobbinette, cheesecloth, gauze, veiling, scrim. Don't be afraid to use a little color—violet, pink and blue.

Light so diffused will appear to soften faces, round out sharp features, give warmth and modish modeling. Set one main key light to establish your lighting source and with the other units play for effects. Give heed to the general impression, then give particular attention to eyes and mouth—the most expressive features. And the possibility of highlights in the hair. Illuminate the background sufficiently to establish its character and obtain depth to your picture. It mustn't fade away vaguely into semblance of a painted backdrop; it is to supplement and build up your foreground.

When outdoors under sunlight, use larger frames filled with netting and mounted on poles, to break up the beams. Silver and gold reflectors cost little to assemble. Use them to control shadows and accentuate highlights.

A diffusing filter for your camera is one of neutral color value. Your dealer doubtless can furnish several types. If not, the maker of your camera will tell you where you can secure them. Price is small.

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WHEELS OF INDUSTRY

THE EXPORTATION from the United States of 16mm projectors for 1936 reached a figure of 7388, an increase over the year preceding of more than 5000 machines. The figures are authentic, being supplied by the Department of Commerce, through the enterprising chief of its motion picture division, Nathan D. Golden.

The value of the exportation was \$304,278, which compared with \$124,933 for 1931 projectors sent out of the country in the preceding year. This means the average return to the manufacturers was \$33 each.

Also it means the enthusiasm for ownership of a motion picture camera is not confined to the United States—that it spreads to the far corners of the world. There will be much in Mr. Golden's information that will hearten American manufacturers of 16mm and 8mm equipment to keep abreast of their possibilities in the foreign markets.

Sound motion picture equipment exports during 1936 have increased over \$600,000. During this period \$2,105,-288 worth of American motion picture reproducing and recording equipment was exported to all foreign markets as against \$1,482,281 worth during 1935.

Leica Exhibit Closing

- The third international Leica exhibit will come to a close in Boston March 12. The sessions will be held in the Hawthorne Room of the Parker House beginning March 8. The hours will be from 11 in the morning until 9 at night. The illustrated Leica lecture is set for 8 o'clock in the evening of March 10 in the Boston City Club. In Providence, from March 1 to 6, the exhibit will be held in Faunce House, Brown University.

Show Some Native Films

Assistant Trade Commissioner Miles Hammond, at Mexico, reports motion picture exhibitors in Mexico are required to show at least one nationally produced film a month in their houses under the provisions of a law project approved by the Chamber of Deputies. Nevertheless, in practice it has been found the application of the law is not onerous, as requirement is not made that the na-

tional picture be shown to the exclusion of foreign films on the same program.

Under Article 2 of this law exhibitors are entitled to a reduction to 8 per cent from the 15 per cent collectible as tax on their daily receipts. This is under Article 99 of the finance law of the federal district and federal territories on days when they show films produced in Mexico.

Those exhibitors who do not adhere to the one Mexican film a month quota requirement are liable to a fine of from 50 to 1000 pesos for a first offense and to cancellation of license for a repeated offense.

Desert Service by Morgan

- The new Palm Springs branch of the Morgan Camera Shop, which was opened for business last November at the beginning of the resort season, is conducting a fast finishing service between the Springs and the company's establishment in Hollywood. The store is carrying a good line of Leica, Eastman, Bell and Howell and Zeiss cameras. Mrs. Nina Morgan is aiding her husband in the conduct of the store.

New Mogull Catalogue

- Mogull Brothers of 1944 Boston road, New York, has issued a 72-page catalogue of 16mm silent films. The seventh edition of the booklet lists dramas, comedies, cartoons, sports, travel, religion, educational and miscellaneous subjects. To those interested in 16mm films the company will send the catalogue on request.

Leico Expands

- March 1 M. Leitz, Inc., goes into its new home in the Heckscher Building, at 730 Fifth avenue, New York. The expanding clientele of the company had made necessary the move to larger quarters in order adequately to accommodate Leica owners. All members of the American Cinematographer family are invited to visit the new Leica home, where they will find available enlarged facilities for the demonstration of the camera, its accessories and apparatus.

Triox Cine Tripod

- The Triox Cine Tripod is announced by Burleigh Brooks. The device is of four sections, made of aluminum and is provided with a pan-tilting top. A scale, subdivided to every 15 degrees, is

etched on the round panoraming top for convenience in synchronizing the edges of the separate parts of a picture.

The tripod is essentially rigid and secure—a tilting lever when pressed down locks the panoraming feature, and the extending handle grip when it is tightened locks the tilting feature.

"Wellcome" Diary for 1937

- The new edition of the "Wellcome" Photographic Exposure Calculator, Handbook and Diary for 1937, is announced. One of its features is that it gives information as to the speeds and development characteristics of nearly 300 different plates and films and comparative exposure factors for development papers and lantern slides.

The monographs contain information of interest and utility on such subjects as developing, printing, enlarging, toning, color and infra-red photography.

A Lot of Lenses

- When one firm in the course of a quarter century grinds out (and please note that is not slang, brother) a million lenses that's real news in any publication. That is the record marked up by Joseph Schneider & Co.

When the company began business in Kreuznach it was agreed no inferior product would be permitted to leave its factory and that one of its chief aims would be to send out precision lenses to be sold at a reasonable price.

So the company tells us the millionth lens has left the factory. A bit of figuring will show a significant result—that the company has produced an average of 40,000 lenses each and every year. And that is a lot of lenses.

Big Merger in Indo

- Announcement is made by Fazalbhoy Limited, with administration offices at 160, Tardeo Road, Bombay 7, that under that corporation name will be conducted in future the business formerly carried on by A. Fazalbhoy & Sons, Bombay Radio Company Ltd., and Sound Equipment Company Ltd.

Film Dryer by Brooks

- Burleigh Brooks announces the Bee Bee Viscose Film Dryer, a film and plate drying device of American construction.

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Kodaslide Projector Reproduces "Stills" With Great Brilliance

NEWS COMES from Rochester announcing the Kodaslide Projector, a product of the Eastman Kodak Company. This instrument provides owners of Kodak Retina, Kodak Bantam Special and other miniature cameras with an ideal means of projecting their "still" pictures. Manufactured to precision standards, this brilliant projector throws screen images with unusual clarity over a large picture area, as shown in the accompanying table.

Either full-color Kodachrome transparencies, or black-and-white film positives from No. 135 to No. 828 negatives may be shown. For projection, each individual picture, properly masked, is mounted in a 2 by 2 inch glass slide, suitably bound.

The projector is strong, solid and extremely easy to use. It has an attractive baked black-enamel wrinkle finish and dull-nickel operating parts.

This "douser" method of shifting from picture to picture is one of the projector's chief features. The 2 by 2 inch glass slides are inserted in the metal gate at the top of the slide holder and are gravity-fed by means of the slide-shifting lever at the side of the projection head.

After the first picture has been viewed the lever is raised. The image on the screen is cut off by a shutter. Then, when the lever reaches its limit, the slide just projected drops by gravity to the holder below the projection head. In this position the dropped slide acts as a stop to locate the next slide in the projection gate. As the lever is lowered to its original position the new slide is clamped into position by spring fingers and the shutter opens, revealing the entire picture properly positioned and securely held in focus. The slide previously projected may then be removed edgewise from the holder.

Lamp and Lamp House

Illumination is provided by a 200-watt 115-volt lamp with concentrated coil-coil filaments. Due to the high heat output of the lamp, the square lamp house has been carefully calculated as to size and design to remain safely cool on its outer surface. This is accomplished by means of an inner shell which permits an air space on all four sides.

In addition, natural draft ventilation exhausts the heat from the top of the lamp house. The lamp house cover is baffled and may be turned so that both the heat and stray light are directed away from the operator and audience.

A spherical aluminum-coated glass reflector is located behind the lamp. The three-piece condenser lens unit, ample in size to give uniform screen illumination, has in addition a disc of heat-absorbing glass to prevent overheating of the slides.

The Kodaslide comes equipped with a 4 7/8 inch projection lens of high quality. Its focal length assures



The Kodaslide Projector shows large, clear screen pictures from Kodachrome transparencies or black-and-white film positives, mounted in 2 by 2 inch glass slides.

plenty of room in front of the projector for spectators. The lens gives remarkable definition and has a flat field; hence, the projected pictures show an even all-over sharpness right to the corners. Furthermore, the lens is free from distortion and chromatic aberration and is well corrected for astigmatism.

The following table gives several examples of the size of the projected picture for both Kodak Retina and Kodak Bantam Special pictures, mounted in the 2 by 2 inch slides and shown with the projector at different distances.

Distance of Projector From Screen

Kodak Retina Slides	Kodak Bantam Special Slides	Picture Size On Screen
10 feet	8 1/2 feet	21 x 30 inches
13 "	11 "	28 x 40 "
16 1/2 "	14 1/2 "	36 x 52 "
19 "	17 "	41 x 60 "
23 "	20 "	50 x 72 "

Because owners of the new projector will want to show both vertical and horizontal pictures, a square screen is recommended. Two knurled thumb screws at the front of the projector base provide a convenient means of adjusting the height of the light beam to the position of the screen.

Change of focus is accomplished smoothly by rotating the spirally grooved lens barrel. The lens may be removed easily for cleaning.

Because of its sturdy construction, the Kodaslide is not easily jarred out of focus—never by the operation of the slide-shifting lever. The projector is 6 1/2 by 9 1/2 inches at the base and stands 10 1/2 inches high. Its weight is 5 pounds. An 8-foot length of rubber-covered cord with plug and convenient tumbler-type switch is provided.

The price of the projector is \$48.50. A carrying case is available at \$8. It will hold the projector, lens, and two slide boxes holding about 50 slides each.

Cinematographers Have Language All Their Own

TERSE, DESCRIPTIVE WORDS that roll off the tongue are so much easier and faster to use than precise technical expressions. That, I presume, is one reason for the development of the studios' strange language. Picture production has to keep moving once it gets under way. There is no time for deliberate diction or academic speechmaking.

So long as all hands understand the expressions it is comparatively simple to say "Slip another skirt on that broad," instead of lecturing: "Will an electrician kindly place another screen made of silk in front of that broad-side lighting unit so as to afford a degree more of diffusion." It may sound a bit frivolous, possibly, but if we failed to relax between shots we all soon would be in sanatoriums suffering from nervous breakdown.

Here are more specimens of the cinematographer's shop talk:

MAGAZINE. A removable compartment where exposed and unexposed film is wound, attachable to camera.

MARK IT. Simultaneously to register on picture negative an action and on sound track the sound resulting therefrom so that both films may be exactly synchronized in the cutting room. In some studios this is accomplished with a wooden clapper; in others by a device that automatically fogs the two films.

MATCH BOX. A baby stop light.

MEMORY SHOT. A scene made from reasonably close range, a view of an actor from the knees up.

MINIATURE. A small replica of an item too expensive or impractical to build in life size. Photographing it at short distances makes it fill the screen and so seem normal when viewed.

MIXER. The chief sound man on a set.

MOOD. The dramatic value or weight of a scene. It governs the lighting key.

NET. A thin netting, as cheesecloth, hung before a lamp to gain diffusion.

"Pan" Goes Two Ways

NIGGER. A gobo, a black.

OILS. Gelatine screen used to obtain diffusion; so named from colored oiled paper used for the purpose in the early days.

PAN. (1) Panchromatic. (2) To "panoram" with camera.

PANCAKE. A low, squat stool to stand on when sighting a high camera set-up.

PARALLEL. A four-legged platform, built like a card table.

PRINT. A printed copy of a negative made on positive film.

PRINT IT. An acceptable photographed scene, an OK'd take. Of several efforts, this is the one for the laboratory to print for the picture.

PROJECTION BACKGROUND. A transparency background, a moving background to a set projected from the rear from film specially made for the purpose.

PROCESS SHOT. A general term designating a scene composed of any expedient other than normal sets and actors.

PROPS. Properties, the thousand and one articles used in dressing or furnishing a set.

POSITIVE. A print from a negative, the reverse image from negative.

PULL IT DOWN. To limit the area covered by the flood light, to concentrate or "spot" it more.

by
Joseph August, A.S.C.

ARTICLE II

RAFTERS. The temporary scaffolding erected around a set.

RELEASE PRINT. The print made from a completed negative which is released to theatres for exhibition.

RETAKE. To do and shoot a scene over again.

RIBBON. Negative film.

ROLL 'EM. To start the motors driving camera and sound recorder.

ROUGHING IN. The first lighting of a set preparatory to lighting of actors.

RUSHES. Dailies, prints of yesterday's negative, presumably rushed through the laboratory for critical inspection.

"Save 'Em" for Economy

SAVE 'EM. Turn off the lights, kill 'em, when not needed.

SCENE. One of the many unit episodes that combine to make a picture; a sentence or paragraph of the entire story.

SCRIM. Thin fabric placed before a lamp for diffusion.

SECOND. The operative Cameraman.

SECOND BROOM. The assistant prop man.

SENIOR. A large light unit containing a 5000-watt lamp; larger than a Junior.

SET. The setting built on a stage or location wherein action takes place.

SET-UP. (1) To place a camera in position for shooting. (2) The place where a camera is set up for a shot.

SHARP. In focus.

SHOT. A picture, a scene, a view that has been or is to be photographed.

SILVER. A reflector covered with silver leaf, throwing a white light.

SINK. Synchronize. Picture and sound must be "in sink."

SKIRT. A screen of thin silk, possibly colored, placed before a lamp to give diffusion.

SLATE. A small blackboard on which is chalked scene number, etc., for guidance of laboratory and cutting room.

SOFT. A flat negative, the reverse of contrast.

SOUND. Dialogue, music, noises, anything going on the sound track.

SOUP. The developer used in processing negative in laboratory.

SPEED. Camera operating at speed of twenty-four frames of negative per second.

STEREOPTICON BACKGROUND. A still background to a set projected from a picture behind the backwall of set. Used to give appearance of far distance to exterior sets built on stage.

Continued on page 127

New Bausch & Lomb Laboratory for Applied Research

At a cost of approximately \$40,000 and a 50 per cent increase in its staff of graduate chemical engineers and metallurgist, Bausch & Lomb has opened a new laboratory for applied research.

Theodore B. Drescher, vice-president, under whose direction the new laboratory has been placed, outlined the company's plans. He said:

"Believing the optical industry in America will meet increasingly keen competition from abroad, where low labor costs exist, Bausch & Lomb will engage in a broad program of fundamental investigations on the chemistry and physics of glass surfaces and in the development of new materials and processes for the industry."

Guided by Frank P. Kolb, chief chemist, and Theodore J. Zak, assistant chemist, company officials saw the conversion of nearly 9,000 square feet of space on the fifth floors of two buildings facing the Genesee River into a series of laboratory units devoted to research in the fields of metallurgy, experimental electro-plating, spectroscopy, photomicrography and physical testing. A well-stocked library and a consulting room add to the facilities of the research staff.

Physical Tests for Industry

Real advance has been made, according to Mr. Drescher, in the perfection of cements for optical purposes; in the study of abrasives and polishing materials for optical glass, and in the investigation of the chemical and physical reactions on glass surfaces, induced by industrial gases, corrosive atmospheres and other atmospheric conditions. Further studies on these and many other subjects are planned.

One of the most interesting units is that in which Dr. James E. Wilson and his assistant, Vernon Patterson, are engaged in applying metallurgical equipment to the study of the structure of the steels and alloys used in industry. Physical tests are employed to check the quality and adaptability of materials.

This laboratory is equipped with the new Bausch & Lomb metallographic instrument for the study of the crystal structure and surface characteristics of metals. It also has one electric heat-treating furnace with controlled atmosphere and a smaller one for treating high-speed steel at ranges up to 2500 degrees F.

This equipment is supplemented by Brinell and Rockwell hardness testers and implements for cutting and polishing metal specimens for microscopic examination. This department will act as a control for the materials used in the many departments of the plant and will

assist the sales department in supplying information sought by customers.

Closely allied with this department is the laboratory for spectrographic analysis, a field in which the company is a world leader. In addition to testing spectrographic equipment built for laboratories in the United States, the application of spectroscopy to industrial problems, particularly in the field of metallurgy and cameras, has been recognized as an indispensable requirement. With the facilities of the new laboratory, the company will assist industry in the solution of problems in which spectroscopy is important.

Cutting the Dust Counts

One of the most interesting and valuable developments of the chemical laboratory has been in connection with a new transparent resin for use in protective glasses. The refinement of this commercial material for optical requirements has been an outstanding achievement. Sheets of this transparent substance have shown a light transmission efficiency of 90 per cent.

The product has been found to have qualities superior to any materials avail-

able in the past as a laminating medium for lenses. Investigations of this material and other cementing substances are conducted in a new air-filtered room in which the dust count is under 300,000 units a cubic foot, while the ordinary atmosphere has a count of from three and a half to four million.

Test Analyses Continue

The testing and control laboratory, under the direction of Roy A. Kirchmaier and Joseph T. Anderson, is equipped for general analytical work and will continue to analyze and test the hundreds of materials purchased or made by Bausch & Lomb which enter into its own products and processes.

Dr. D. M. Webb has been added to the staff for research in chemistry. One of his immediate problems will concern the electro-deposition of various metallic substances as a backing for reflectors.

The manufacturing laboratory, under George G. King, is provided with facilities for making pitches, waxes, resins, polishing felts and a multitude of the 600 other materials required in the B&L plant or for sale to outside industries.

JUST BREAKING IN

Continued from page 89

• "But what a man he is," Paul went on with real enthusiasm. "I found him in Singapore, where he runs the Capitol Theaters. He knows all the men who go out to the Orient in search of film adventure. He is a sidekick of Frank Buck. He meets all the incoming ships, just to keep track of his friends. If any one tells you he has been in Singapore and you are skeptical ask him to tell you about Joe Fisher. Your unasked question will be answered right off the bat.

"Joe really is a world film figure. In a 16mm reel of film he has the greatest collection of stunt stuff ever put together. He has collected from every one passing through Singapore who had anything of real value."

The last time this writer saw Joe Fisher was a dozen years ago in Los Angeles. The first time was a quarter century ago in New York at an exhibitors' convention. At that time his theater ventures were in South Africa. Paul is right when he says Joe Fisher is a world film figure.

Condemn Mutilating Devices

Continuing its campaign against mutilation of motion picture release prints, the Projection Practice Committee of the Society of Motion Picture Engineers at its recent meeting passed a resolution condemning certain devices for cueing prints now on the market. The resolution reads:

"The Projection Practice Committee of the Society of Motion Picture Engineers does not approve of any structural modification, injury or mutilation of the standard release print by the projectionist, and views with disfavor the sale of devices capable of causing physical damage to film for cue marks or the like. The committee regards cue marking as a function exclusively of the laboratory or exchange which is involved."

This latest action of the committee was passed after such a device was exhibited before the committee. This device enables the projectionist to punch a number of holes in the film to indicate points of change-over and is offered for sale to projectionists.

Cornelius Bol Comes to Rescue of Stand-ins Worn Out by Heat

By permission of the editors of Time, The Cinematographer is privileged to reproduce for its readers a story of amazing results attained by Cornelius Bol, working at Stanford University. All who have to do with lighting will find here figures that undoubtedly will interest them. Especially may this be true in the case of those who long have sought light without undue heat. But read it for yourself. It is from Time of February 8:

Floodlights commonly used in Cinema studios may heat up small sets, make actors too uncomfortable to do their best work. Beads of sweat on shapely noses and fine foreheads will ruin takes. Last week a bulky Dutch physicist named Cornelius Bol, working at Stanford University, had film producers interested in a tiny, super-powerful lamp which will keep their stars cool while working.

Bol's lamp is a stout, strongly sealed quartz tube less than a quarter-inch in outside diameter, with an inside diameter of .08 to .04. It contains neon to start an electric arc, is so full of mercury that when the arc vaporizes the mercury, the pressure rises as high as 300 atmospheres. At the core of the mercury the temperature is 14,000° F., an inside wall of the tube 1,800°.

The lamp is served by a water cooler in which the water must be hurried along in its jacket to prevent the formation of steam bubbles.

Enough Light For Filming

The heat given off is negligible, since the light of mercury vapor slides off the visible spectrum at the opposite side from the red end where heat waves predominate. The lamp, however, sheds enough red light for filming.

A five-inch lamp, no bigger than a clinical thermometer, gives a maximum of 80,000 candlepower. A lamp of this length requires 8,000 volts (1,600 watts for each inch) but the current is only 1.5 amperes. Physicist Bol believes his little tubes will be useful for lighting airports, cinema projection, treatment of skin diseases.

Has Leased Rights

He has leased manufacturing rights to General Electric Co. and Philips Glow Lamp Co. of Holland, declared last week that two motion picture companies had approached him with offers. Cast figures were concealed last week but a Bol informant said they were "ridiculously low."

Cornelius Bol talks wittily in his imperfect English, likes sloppy, comfortable clothes, has a plump wife and five chubby sons for whom he keeps a horse and a pony-cart. Born in Holland 52 years

ago, he came to the U.S. in 1907 to study at Princeton, Stanford, the University of Montana, returned in 1916 to his native land where he worked on the development of sodium vapor lamps in the Philips laboratories and devised a way of sealing chrome steel to glass in X-ray apparatus. Last autumn he again bobbed up at Stanford as a research assistant. "Europe," he said, "is no place to bring up five children." Stanford is financing his present work, expects some share in the profits.

Transitions Are What You Make Them

Continued from page 114

panion, the fade-in for setting a definite "full stop" to a line of thought. There is the lap-dissolve for the very smooth transition between clearly related scenes and sequences. And there is the wide range of wipes for use when we can af-

ford to have the transition call attention to camera trickery.

The question is, what are we going to say with all these filmic punctuation-marks? The really clever director is the one who knows how to lead his scenes up to natural transitions. For example, suppose we want to bridge the gap between baby's bath and his dinner. Why not end the bath sequence with a straight-down shot of the swirl of water running from the tub, and open the meal sequence with a similar angle of milk pouring into a cup? Then, from the table to bed can be bridged by a close-up of a napkin being folded, followed by a close-up of the bedclothes being pulled down.

With or without the help of mechanical tricks such as fades, dissolves or wipes, these shots will blend the scenes together evenly. They are in themselves good transitions. And though they may look simple and natural on the screen they are evidence of fully as much cinematographic skill as the trickiest of wipes.

And here's a surprising secret—if you plan your scenes with these natural transitional shots in mind you will have less and less need to worry about putting in intricate mechanical transitions!

Wheels of Industry

Continued from page 120

It utilizes the well-known properties of Viscose sponges. This material is absorbent, durable, practically imperishable, of a velvety softness when wet and rapidly drying. It is lintless and cohesive—and will wipe off moisture from films and plates—evenly, thoroughly and instantaneously.

Second Rolleiflex Salon

• The second Rolleiflex Salon and Exhibition will soon be on its way.

The first Salon was instituted approximately two years ago. A selected group of the prints from that show has been "on the road" ever since.

The prints submitted will be grouped in four primary classifications: Pictorial, portrait, technical and news pictures. First prizes of \$50 will be awarded to the makers of the best print in each group. Twenty-five dollars will be awarded the prints selected as second best. Provision is also being made for the awarding of twenty-five honorable mention certificates. An additional prize of \$100 will be given to the maker of the best picture, to be chosen from the first four prize winners, thus making it possible for some lucky individual to win a grand total of \$150.

Communications regarding this contest should be addressed to Burleigh Brooks, Inc., 127 West Forty-second Street, New York.

A J U N I O R S O C I E T Y

for the Amateur

THE AMERICAN SOCIETY OF CINEMATOGRAPHERS has organized a junior branch of its association for the amateur to be known as the SOCIETY OF AMATEUR CINEMATOGRAPHERS.

FOR MANY YEARS amateurs have been requesting the American Society of Cinematographers to form an organization for them that would be representative, authoritative and instructive.

IT WOULD BE EASY to form such an organization in the spirit of accompanying enthusiasm, but to insure the continuance of such an association real ideals and a constructive policy are required.

THE APPLICANT must own a camera, he must have made motion pictures, and he must submit a picture to the reviewing board which is made up of members of the American Society of Cinematographers. This does not mean that the amateur is going to be judged by 100% professional standards, as practically every member on the reviewing board operates either an 8mm or 16mm camera and is familiar with the shortcomings of the amateur's equipment.

MEMBERSHIP will include a subscription to the American Cinematographer. It also will include the use of the outstanding films made by members of the Society of Amateur Cinematographers. As films are submitted, the best will be duplicated and an analysis prepared by a member of the American Society of Cinematographers. This analysis will go with the picture and the picture will be available to any member of the Society of Amateur Cinematographers.

WRITE FOR APPLICATION BLANK AND FULL PARTICULARS.

American Society of Cinematographers

1782 N. Orange Drive

Hollywood, California

Amateur Movie Club News

Continued from page 116

the actual start of Amelia Earhart's famous solo flight across the Atlantic, which no newsreel secured, and the first sailing of the United States Liner Manhattan, which was filmed from the pier-head in New York, in a downpour of rain at midnight.

These parties have been copied in other parts of the country, and are fast becoming one of the notable outgrowths of the amateur motion picture hobby.

Los Angeles 8mm Club Will Mention Society in Titles

A leader strip announcing that the film's maker is a member of such and such an amateur cine club is something all club members very properly like to include in their productions. From the club's viewpoint, however, it is not always easy to provide such leader strips. Where some members shoot 16mm and others 8mm, some black-and-white and others color, there is a good deal of physical complication.

There is also the unpleasant matter of cost, for few if any club treasuries could stand the drain of providing complete leader film for the members gratis—and, believe it or not, no club treasurer enjoys making members pay for such adjuncts of membership.

The Los Angeles 8mm Club has solved this problem very neatly. At the club's February meeting, held at the Bell & Howell Building in Hollywood, Secretary M. R. Armstrong distributed title-cards which enabled the members to make their own club leader strips. As shown in the accompanying illustration, these cards carry the club emblem and the words, "Member Los Angeles 8mm Club."

The cards are made in two sizes, to fit the average home titler, and in two types: one on white paper, with the word "member" in red and the rest of the lettering in black, for use in black-

and-white films; the other, with the same printing but on pale blue paper, for use in Kodachrome pictures. Thus with two cards, the club member can produce a variety of effects in either black-and-white or color.

Using the white card, he can by using a blue filter darken the red-printed word, "member," and thus make it more prominent.

Using an orange or red filter he can

lighten it. Photographing the same card in Kodachrome he can get a wide range of effects with projected colored light. Using the blue card and filters for black-and-white he can get a soft, neutral gray title, or progressively darken the background as he wishes.

Celebration in Philadelphia

• The Philadelphia Cinema Club held its anniversary banquet February 18 in the Rose Room-McCallister, 1811 Spring Garden street. A. L. O. Rasch, secretary-treasurer, reports the occasion was successful, one of the factors contributing to that result being the door prizes given by the following dealers:

Eastman Kodak Stores, two 8x10 silver finish picture frames; Klein & Goodman, 100 ft. Eastman Panchromatic film and 50-ft. magazine Kodachrome film; H. & R. Camera Exchange, Craig Jr. splicer for 8mm or 16mm; M. & H. Sporting Goods Co., Testrite pan head and double reflector on tripod and lights.

P. Rosenfeld, Craig Jr. splicer for 8mm or 16mm; Seaboard Camera Stores Inc., Keystone titler 16mm or Kodak 8mm rewind and splicer; Street, Linder & Propert, 100-ft. Type "A" Kodachrome film; Wanger's Camera Shop, 100-ft. Agfa Finopan film; Williams, Brown & Earle, Inc., Two Da-Lite Unipod canes.

Portland Cine Club Meets

• The February meeting of the Portland Cine Club was held on the 26th in the lounge room of the Portland Chamber of Commerce. Shown to the members were sound pictures on 16mm and also 8mm and 16mm films taken by members. Announcement had been made it was to be the night of the big drawing. That was for the prizes that had been given by Beattie & Hoffman Inc., Eastman Kodak Stores, Joe Freck, J. K. Gill Company, Walter Leve, Meier Frank Company, Lloyd F. Ryan of Bell and Howell, Sandy's Camera Shop, Sherman, Clay & Co., C. A. Wagner Company, James Walsh and Weisfield and Goldberg.

Bay Cinema Club Meets

A questionnaire conducted by the Cinema Club of San Francisco showed the members are interested in taking indoor pictures. At the meeting held February 23 Member Gordon Michie and O. J. Smith of the Eastman Kodak Company gave a talk on the subject of indoor pictures. Also they gave a demonstration of proper lighting for such photography.

H. T. Kelly, a guest, screened an 8mm film for constructive criticism.



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Studio Cinematographers Have Language All Their Own

Continued from page 122

STILL. Motionless, a picture made by a portrait camera.

STOCK. Negative film.

STOCK SHOTS. Scenes already on hand, newsreel clips, travoliques, etc., that can be utilized in a picture.

SUN ARC. A large 150-ampere arc lighting unit.

"Test" Tells the Story

TAKE. A photographed scene.

TAPE. Measuring tape to determine focus by measuring distance between lens and object.

TEST. To discover by actual experiment the effect of light, make-up, wardrobe and such on film. To determine photographic qualities of a new actor or of an old one in a new character. To see what sets or locations really look like on the screen.

TEST BOX. A small portable developing set frequently used on distant locations.

THIN. Underexposed.

TILT. To move camera up or down.

TINS. Reflectors covered with polished tin, throwing a hard, hot light.

TOSS 'EM IN. Turn on the lights; hit 'em.

TRANSPARENCY. A background to a set projected from the rear on a transparent screen.

TRICK SHOT. Any process photographic result not as the camera normally sees it.

TURN 'EM. Roll 'em, start the motors driving camera and sound recorder.

TWO SHOT. A medium shot.

WAIST FIGURE. A view of an actor from the waist up.

WANGLER. A boom man, he maniplulates or wangles the boom from which the microphone is suspended.

WHITE LIGHT. Light from an arc lamp.

WILD CAMERA. A camera not synchronized to a recorder, a camera not used with sound, a camera with speeds other than the normal twenty-four frames per second.

WIRY. Too much contrast.

WRAP IT UP. Let's go home, the day's work is done.

ZOOM SHOT. With the camera stationary, a lens device moves forward or backward giving the image an appearance of leaving or nearing the spectator, with proportionate variation in size.

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In every step of lens manufacture, Goerz Precision is evident. In the careful selection of the raw material, in the meticulous grinding and polishing, in the critical supervision of each detail, in the final rigidity testing—this precision holds—and affords to users of Goerz Lenses an unequivocal and unconditional guarantee of their quality and performance.

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The King of Allah's Garden

Continued from page 111

became an idea, so that we wrote it into the story as "an abandoned jungle outpost."

To get the most interesting angles we became contortionists, trying to dodge an "American wire fence" and a recently surfaced macadam road which crossed our line of view within twenty feet of the walls!

The "fort" structure is actually a marvelous granite gateway to a beautiful estate. The front which we used is comprised of two twenty-foot turrets on either side of an immense iron door. A sentry-box, gridded open-windowed "cell" and a twelve-foot wall partly hidden by thick growth of tall trees extend from both sides of the entrance. Each figured in our scenes.

The property used as our location is entirely English in style. Depression years have wrought great changes to its appearance, with vines and brush climbing over the high walls and hiding the paths. This run-down condition, of course, aided in giving us the touch of realism our story needed.

Our exterior photography was completed in eight months' spare time, while another month was devoted to interiors, titling, cutting and editing. Originally it ran into 2,000 feet, but after elimination of the "not so good" it now stands at 1200.

"The King of Allah's Garden" has received considerable press comment in our state whenever presented. We offer it with planned programs of other subjects.

The work still stands as our pride, as a first experiment, from which we have gleaned many valuable aids to present and future work. Our group of movie makers can enumerate many flaws, in photography, acting, and editing, but further remodeling is out. As the 16mm equipment and its followers advance through the years we believe it will be a pleasant "memory" to revive.

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River Roll Along

Continued from page 93

point of the Ohio and Mississippi Rivers. Cairo, where was being waged a valiant fight by man against the elements and the two mighty rivers! Cameramen grinding away, with threats of compulsory work filling sandbags, to help stem the overlapping waters. Man fighting his master . . . Ole Man River! And newsmen fighting all odds . . . to get the story . . . the great flood of '37.

The waters are now going down . . . Ole Man River has again proved himself master! So have the newsmen in giving a graphic account . . . in informing an outside world of the havoc . . . of the heartaches . . . of the pitiful plight of the victims of Ole Man River.

The crest is spent . . . the big flood of all time . . . the big flood of '37 has now entered the pages of history and the most graphic pages are recorded on celluloid . . . on the celluloid of the newsmen. Once again the newsmen have mastered another heretofore impossible enemy! This time Ole Man River!

Cameras Should Be Instruments of Illusion

Continued from page 119

Every woman knows she appears to better advantage under a certain kind of light. Photograph your women subjects under light conditions approximating their own choice. If the children are temporarily in one of the many stages of growth that interferes with their physical appearance, blot out the blemishes with proper light application.

It's entirely legitimate. Even your portrait photographer places lights to advantage—and then retouches his negative. Films that fail in this regard falls short of its true purpose.

16mm Theatre

According to reports, the J. H. Cooper Enterprises, Inc., which have theatres in four Colorado cities, are offering 16mm pictures in their houses in conjunction with their regular shows.

For this purpose they have installed regular 16mm projectors. The 16mm pictures are usually of local sports events, festivals, fairs, etc.

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To set up the Da-Lite Challenger, simply open the legs of the tripod, hook the screen over the goose-neck and raise to height desired.



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To insure perfect focus of the entire picture, the center rod of the tripod of the Challenger Screen is square instead of round. It has a slot or groove in which the handle mounting slides up and down when the screen is being adjusted in height. This square, slotted construction prevents the case from turning on the center rod and throwing the lower part of the screen out of focus. Note (at left) the wide supporting band on the case and the sturdy handle mounting on the center rod.

3. NON-SAG TOP SLAT

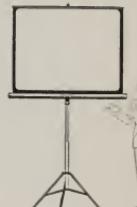
A rigid metal slat across the top edge of the screen fabric of the Challenger does for the upper part of the screen what the case does for the lower part . . . keeps the upper corners and sides straight, permitting perfect focusing of the entire picture.

4. GLASS-BEADED SURFACE

For the average operating conditions, in home, school, club or church where most of the audience can be seated within a twenty-five degree viewing angle of the screen, the Da-Lite glass-beaded surface is the most efficient. It reflects the maximum amount of light and gives the brightest, clearest and most sharply defined pictures. Da-Lite manufactures screens with other surfaces, but unless another type is specified, furnishes the Challenger and other portable models with the beaded surface.

1. ADJUSTABLE HEIGHT

The screen you select should be adaptable to the varied projection requirements which you will have in showing movies. The Da-Lite Challenger is the most versatile of all portable screens. It can be set up anywhere. It ALONE offers a choice of three positions* to which the fully opened screen can be raised. A catch spring locks the screen automatically at the desired height. No thumb screws! In the four larger sizes, the screen is lifted by means of a crank.



*For Larger Audiences
This height permits projecting movies above the heads of the audience and seating more people in direct line with the screen.



*For Small Groups



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5. IMPROVED HANDLE MOUNTING

The leather handle of the Challenger, instead of being fastened directly to the side of the metal carrying case, is attached to a special angle-iron mounting, encompassing the center rod of the tripod. A wide band of heavy gauge steel around the case is pivotally attached to this angle-iron. Thus, there is no strain on the case. You get this practical construction only in the Da-Lite Challenger.

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